



Lower Duwamish Waterway Superfund Site Community Involvement Plan





Community Involvement Plan for Lower Duwamish Waterway Cleanup

What is a Community Involvement Plan?

A Community Involvement Plan (CIP) provides an overview on the outreach tools and techniques that we will use throughout a cleanup of a polluted site. This update of the Lower Duwamish Waterway CIP is based on inputs from local residents, tribal leaders, community organizations, businesses, government representatives, and other stakeholders.

Early Action Area (EAA) Cleanups



Where is the Lower Duwamish Waterway?

The Lower Duwamish Waterway (LDW) Superfund site is a five mile segment of Seattle's only river, the Duwamish. The river flows between Georgetown and South Park and through the industrial core of Seattle into Elliott Bay.

Why is the Lower Duwamish Waterway polluted?

The LDW has served as Seattle's major industrial corridor since the early 1900s. This has caused the Waterway's sediments (river bottom) to be contaminated with toxic chemicals from many sources, ranging from stormwater runoff, wastewater, and industrial practices. While the environment has considerably improved, contamination continues to threaten human health and the environment. The Washington Department of Health issued a fish advisory recommending no one eat crab, shellfish and fish (except salmon) from the Lower Duwamish Waterway. Salmon (except blackmouth salmon) are the healthiest choice because they spend a short time in the Duwamish River.

Who is most impacted by the cleanup?

The Duwamish Valley is the ancestral home of the Duwamish Tribe. It is one of the most diverse areas in Seattle. Roughly 42% of the Duwamish Valley's population are people of color and roughly 21% of the population lives below the poverty line. The cleanup will impact many groups, including the Georgetown and South Park neighborhoods, the Suquamish, Muckleshoot, and Duwamish Tribes, the business/industry community, and people who catch and eat fish and other seafood from the LDW.

What has been done to clean up the Lower Duwamish Waterway?

The EPA declared the Lower Duwamish Waterway a "Superfund" site in 2001, meaning it was eligible for a special federal cleanup program due to the severity of its contamination. The EPA is responsible for administering the cleanup of sediments in the Waterway, and the Department of Ecology is responsible for controlling sources of pollution to the Waterway. The City of Seattle, King County, the Port of Seattle, and the Boeing Company stepped forward to complete a comprehensive study, as well as cleanups of some of the most contaminated areas (Early Action Areas, shown at left). In 2014, the EPA published a cleanup plan for the remaining sediment cleanup.

What will happen next in the cleanup?

Studies and engineering designs are the next steps. Then, once pollution sources are controlled sufficiently, almost half of the LDW will be actively cleaned up through dredging or placing clean sediment on top of the river bottom. Construction will take about seven years. The rest of the LDW will be cleaned up through natural processes over an additional 10 years.

Completed Phases					Current Phase	Future Phases	
Investigate contamination and set cleanup goals	Identify areas to get cleaned up	Determine effective methods of cleaning up these areas	Begin cleanup in the most contaminated sites	Incorporate public feedback & finalize the cleanup plan	Develop detailed engineering plans for cleanup	Implement the cleanup plan	Monitor the cleanup
Involve the public (ongoing)							
Control sources of pollution (ongoing)							



The US Environmental Protection Agency's

Community Involvement Plan for Lower Duwamish Waterway Cleanup

How will we keep people informed about and engaged throughout the cleanup?

We will use a variety of tools and techniques to provide opportunities for you to give input into the cleanup. These tools will take into account environmental justice, meaning it will aim to ensure the fair treatment and meaningful involvement of all people regardless of race, color, national origin or income. For example, as needed, we will provide interpretation services at meetings and translation of written documents.

Our tools and techniques

Go to community gathering places (cafes, neighborhood meetings, etc.) to give presentations and solicit input.



Host informal and formal public meetings that are convenient and inclusive, for community members.



Send out updates via websites, email, and social media; as well as mailings, flyers, and fact sheets.



Provide press releases to media outlets that reach diverse audiences.



Coordinate with other federal, state, and local government agencies.



Engage in government-to-government consultation with the Muckleshoot and Suquamish Tribes.*



Provide opportunities for organizations and individuals to apply for job training programs.



Collaborate with the Duwamish River Cleanup Coalition/Technical Advisory Group, the Community Advisory Group.



Hold informational meetings open to all stakeholders involved in the cleanup.



Hold informational meetings for just the tribes, trustees, and community groups involved in the cleanup.



Convene a "Roundtable" to make recommendations to the EPA on the implementation of the cleanup plan.



Convene a consortium to develop advisories and other ways of reducing health concerns from fishing.



How can you learn more and get involved?

Visit <https://yosemite.epa.gov/r10/cleanup.nsf/sites/lduwamish>

Contact Julie Congdon, Community Involvement Coordinator: congdon.julie@epa.gov, 206-553-2752

Contact Elly Hale, Remedial Project Manager: hale.elly@epa.gov, 206-553-1215

Contact the Duwamish River Cleanup Coalition/Technical Advisory Group: www.duwamishcleanup.org, contact@duwamishcleanup.org, 206-954-0218

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Introduction

1: Introduction

In November 2014, the U.S. Environmental Protection Agency (EPA) selected a cleanup plan for the Lower Duwamish Waterway (LDW) Superfund site, the lower five miles of the Duwamish River, in Seattle, Washington. As the cleanup moves forward, the EPA is committed to keeping stakeholders informed about cleanup activities, minimizing the impacts of these activities on the communities where possible, and seeking out and providing opportunities for community members to be involved.

In keeping with that commitment, this updated Community Involvement Plan (CIP) provides an overview of the outreach tools and techniques that will be used throughout the cleanup. In addition to the EPA's cleanup, there are many other entities engaged in habitat restoration, control of contaminant sources, land use planning, community events, and the like. The EPA will work collaboratively with others to share information and to involve the public in the LDW cleanup process. This CIP reflects practices and relationships established during a multi-year site study, input received during the public comment period on the EPA's proposed cleanup plan, and feedback from interviews with residents, tribal leaders, organizations, agency representatives, and other stakeholders in and around the Duwamish Valley.

Community Involvement Plan: Provides affected communities with an overview of the outreach tools and techniques that will be used throughout the cleanup

To guide the update of the 2002 CIP, the EPA conducted interviews in 2015 with representatives from state environmental and health agencies, departments in the City of Seattle, King County, and the Port of Seattle, community organizations like the Duwamish River Cleanup Coalition/ Technical Advisory Group (DRCC/TAG), ECOSS, the Muckleshoot Tribe, the Suquamish Tribe, the Duwamish Tribe, and others. The EPA also sought input at community council meetings and held input sessions at cafés, libraries, and other gathering places in the community. For some community sessions, the EPA provided Spanish and Vietnamese interpreters. The EPA also prepared a questionnaire, both in English and Spanish, via Survey Monkey for those who could not participate in an in-person or phone interview or attend an input sessions. In total, the EPA held formal interviews with approximately 65 individuals. Informal contact was made with an additional 83 individuals through drop-in sessions, presentations at neighborhood association meetings, and public meetings. 39 individuals responded to an online survey. Appendix G includes the questions asked in the interviews and the survey. The EPA has used this input to inform its planned community involvement tools and activities in this CIP.

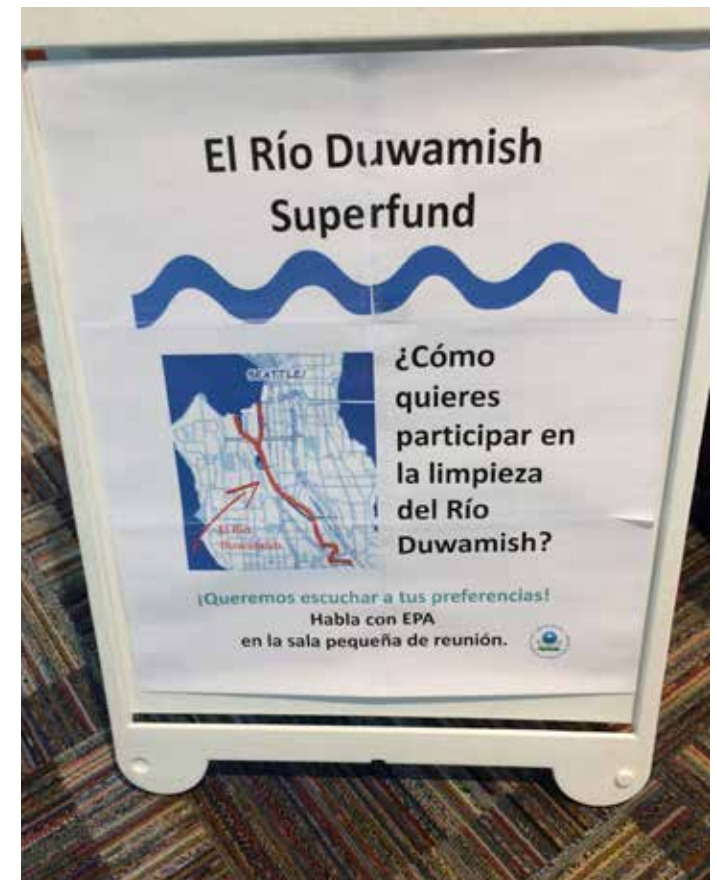
Introduction

Did You Know?

The EPA got feedback from 187 people to help update this CIP! The EPA heard from 65 people in formal interviews, 83 people in casual drop-in sessions, and 39 people in an online survey (available in English and Spanish).

The EPA has also used components of other reports and studies to inform the update of this CIP, including the Health Impact Assessment for the Proposed Cleanup Plan for the Lower Duwamish Waterway Superfund Site,¹ the Just Health Action Fishers Study,² as well as preliminary data from the Lower Duwamish Waterway Group's (LDWG) Fishers Study, and the Economics of Cleaning up the Lower Duwamish.³

Clockwise from top left: The EPA visited local cafes to talk to customers about the CIP; EPA held a drop-in session with Spanish interpretation at the Beacon Hill Library; EPA attended a community dinner and Vietnamese senior karaoke night in South Park to give a presentation about the CIP and solicit input.



Introduction

Superfund: The EPA's Superfund program is responsible for cleaning up some of the nation's most contaminated land and responding to environmental emergencies, oil spills and natural disasters.

Community Involvement at Superfund Sites

The EPA is committed to providing opportunities for public participation in order to ensure the community is involved throughout the cleanup process. The EPA's guidance for community involvement at Superfund Sites is available online at http://www.epa.gov/superfund/community/cag/pdfs/ci_handbook.pdf.

The EPA published its first Community Involvement Plan for the LDW Superfund site in October 2002, at the start of the Remedial Investigation and Feasibility Study (RI/FS). In November 2014, a final cleanup plan, or Record of Decision (ROD), was selected—beginning the design and construction phase of the cleanup.

This CIP:

- Adopts community involvement tools and practices developed since the 2002 Community Involvement Plan;
- Incorporates environmental justice commitments in the ROD and recommendations from interviews regarding ways to further improve community involvement;
- Complements outreach by other government agencies, non-profits, and businesses to help reduce the burden on communities; and
- Identifies existing networks in the Duwamish Valley area to ensure culturally/linguistically appropriate, effective, and efficient outreach methods are implemented.

The CIP's purpose is to serve as a roadmap for the EPA in providing opportunities for public information and input during the cleanup of the LDW Superfund site. The CIP is an evolving document and will be updated as needed to ensure that opportunities for public participation continue throughout the cleanup process.

What is Environmental Justice?

The EPA defines Environmental Justice (EJ) as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental, and commercial operations or policies. Meaningful involvement means:

- People have an opportunity to participate in decisions about activities that may affect their environment and/or health;
- The public's contribution can influence the regulatory agency's decision;
- The public's concerns will be considered in the decision making process; and,
- The decision makers seek out and facilitate the involvement of those potentially affected.

Introduction

Goals

The goals for this CIP for the LDW Superfund site include:

- Providing communities with timely, understandable, and accurate information about the cleanup in a manner that takes into account their preference and culture.**
- Fostering communication and collaboration among stakeholders in the Superfund cleanup.**
- Facilitating public input and ensuring public needs and concerns are considered in the cleanup process.**
- Continuing to engage communities throughout design and implementation of the cleanup, including convening a Roundtable as a means for the community members and local agencies to work together on mitigating impacts of the cleanup on the affected community.**

Source: Julie Congdon

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Location

The Duwamish River is Seattle's only river. It flows north through Tukwila and Seattle, splitting at the southern end of Harbor Island to form the East and West Waterways, which discharge into Elliott Bay in Seattle, Washington. The LDW Superfund site, located south of downtown Seattle, comprises a five mile segment of the Duwamish River and upland sources of contamination. The southernmost portion of the site is located in Tukwila. The central portion of the site encompasses the neighborhoods of South Park and Georgetown.

About the Site

The Duwamish Valley is the ancestral homeland of the Duwamish Tribe, whose longhouse is located near the LDW. The LDW and adjacent upland areas have served as Seattle's major industrial corridor since the LDW was created by widening and straightening much of the Duwamish River in the early 1900s. The widening of the waterway was followed by the industrialization of most of the upland areas adjacent to the LDW. Today, the LDW industrial area is responsible for 100,000 jobs and an annual economic output of \$13.5 billion.

Nearly a century of heavy industrial and urban uses led to poor water quality and contaminated sediments in the LDW. Pipes delivered industrial wastewater and stormwater runoff directly to the LDW or to streams and drains that flowed in to the LDW. When heavy rains overwhelmed the sewage treatment system, untreated sewage, wastewater, and stormwater flowed into the LDW. Spills, dumping, and similar practices were unregulated for much of the 20th century.

While environmental regulation and cleanup of older infrastructure, soils, sediments, and groundwater have helped reduce pollution sources, legacy contamination and ongoing sources continue to impact people and the environment. As a result, consumption of resident fish and shellfish, as well as contact with contaminated sediments, pose a risk to human health.

There are many chemical contaminants in LDW sediment, fish and shellfish. Most of the human health risk comes from polychlorinated biphenyls (PCBs), arsenic, carcinogenic polycyclic aromatic hydrocarbons (cPAHs), as well as dioxins and furans. These contaminants are described in the table on page 7.

About the Site

About the Site

Early Action Areas

The first phase of the Remedial Investigation (RI) identified areas with high levels of contamination for consideration for early cleanup.

Five EAAs were selected for action by the EPA and Ecology. By the end of 2015, 50 percent of PCB contamination in the river bottom was removed through these early action cleanups, including:

- Norfolk Combined Sewer Overflow (CSO)/Storm Drain (SD)
- Duwamish/Diagonal CSO/SD
- Slip 4
- Terminal 117 (T-117)
- Boeing Plant 2/Jorgensen Forge

Contaminant of Concern	Description	Reasons for Concern
PCBs (polychlorinated biphenyls)	Human-made chemicals (for example, used in electrical equipment, transformers, caulk and paint) banned from use in most applications in 1979, PCBs stay in the environment for a long time and can build up in fish and shellfish.	PCBs may cause cancer in people who have been exposed over a long time. They can also affect learning abilities in children. PCBs are linked to other adverse health effects such as low birth weight, thyroid disease, and immune system disorders.
Arsenic	Naturally present at low levels in Puget Sound area rock and soil. Industrial activities have spread additional arsenic over much of the Puget Sound region.	Long-term exposure to toxic forms of arsenic may cause skin, bladder, and other cancers.
cPAHs (carcinogenic polycyclic aromatic hydrocarbons)	Formed during the burning of substances such as coal, oil, gas, wood, garbage, and tobacco.	Long periods of breathing, eating, or skin contact with high levels of some cPAHs may increase a person's risk of cancer.
Dioxins and furans	By-products of burning, chemical manufacturing, and metal processing. Dioxins last a long time and can build up in fish and shellfish.	Toxic effects related to dioxins include reproductive problems, problems in fetal development or in early childhood, immune system damage, and cancer.

The Duwamish River, including the area that is now the LDW, was and still remains a Tribal fishing area. The Muckleshoot Tribe and the Suquamish Tribe have treaty-protected rights to fish the river. Others, including members of other Native American tribes, also harvest fish and shellfish from the LDW for cultural, food security or recreational reasons.⁴ The Washington Department of Health (WA DOH) issued a fish advisory recommending no one eat crab, shellfish and fish (except salmon) from the LDW because pollution makes them unsafe to eat. Salmon (except blackmouth salmon) are the healthiest choice because they spend a short time in the LDW.

The Cleanup: Objectives and Next Steps

The LDW Superfund site encompasses upland sources of contamination as well as contamination within the waterway. The EPA is the lead agency for the in-waterway cleanup, while the Washington Department of Ecology (Ecology) is the lead agency for control of upland sources ("source control"). To date, the site study and most sediment cleanup work has been done by LDWG. This group consists of the City of Seattle, King County, the Port of Seattle, and The Boeing Company.

About the Site



The Lower Duwamish Waterway Superfund Site and Early Action Areas (EAA)

Superfund

The Superfund program operates on the principle that polluters should pay for site studies and cleanups, rather than passing the cost on to taxpayers.

For the LDW Superfund site, four main organizations have stepped forward to pay for the LDW study and a number of Early Action Area (EAA) cleanups so far. Those organizations are the City of Seattle, King County, the Port of Seattle, and The Boeing Company, collectively known as the Lower Duwamish Waterway Group (LDWG).

The EPA has notified dozens of other “potentially responsible parties” that under Superfund law they may be liable for waterway cleanup costs. Many of the parties are currently working together to estimate the share each party should be responsible for.

A successful allocation process allows potentially responsible parties to apportion liability amongst themselves and form a cleanup group, which in turn helps the EPA move the cleanup forward.

The EPA uses the following nine evaluation criteria when analyzing cleanup alternatives:

- Overall protection of human health and the environment
- Compliance with applicable or relevant and appropriate requirements (ARARs)
- Long-term effectiveness and permanence
- Reduction of toxicity, mobility, or volume through treatment
- Short-term effectiveness
- Implementability
- Cost
- State/support agency acceptance
- Community acceptance

About the Site

Record of Decision (ROD):

The final clean up plan that describes the EPA's plan for the cleanup of contaminated sediments.

The final cleanup plan, called the Record of Decision (ROD), describes the EPA's plan for cleanup of contaminated sediments. The final cleanup plan is complemented by the Ecology-led process to control sources of contamination and combines active cleanup measures, such as dredging and capping, with passive measures, such as natural sedimentation. These measures are expected to reduce the health risks associated with consuming resident fish and shellfish from the LDW,⁵ and with directly contacting contaminated LDW sediment through clamming, tribal net fishing, or beach play. These measures also reduce the risks posed by toxic chemicals to the natural environment and wildlife.

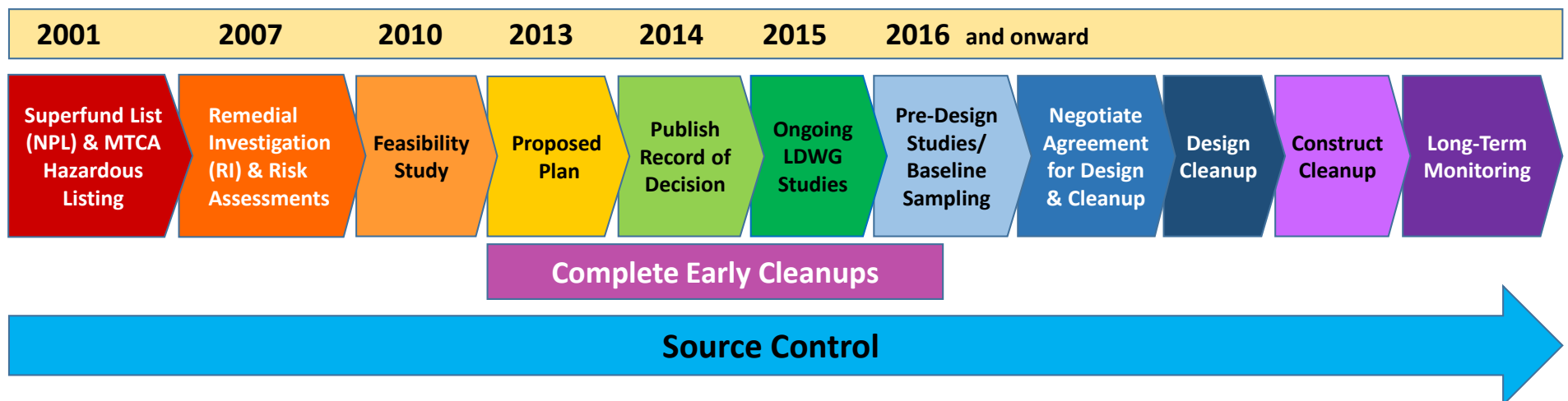
Resident Fish and

Shellfish: Fish and shellfish that live year-round in the LDW.

The ROD estimates that the cleanup will cost about \$342 million and take 17 years: seven years of active cleanup and 10 years of monitored natural recovery. An estimated 177 acres of a total of 412 acres will be actively cleaned up, with the rest cleaned up through natural processes (see page 10 for more details regarding cleanup methods):

- 105 acres of dredging (digging up contaminated sediment, about 960,000 cubic yards). This includes some areas of partial dredging and capping,
- 24 acres of capping (covering contaminated sediments with clean sand and other material),
- 48 acres of enhanced natural recovery (ENR), and
- 235 acres of monitored natural recovery (MNR).

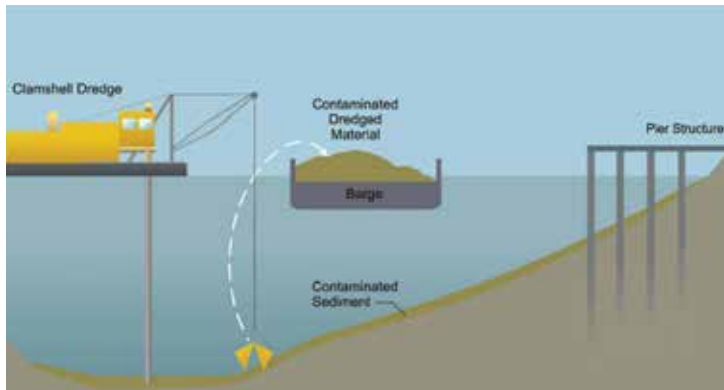
Since completing the RI/FS, LDWG has continued to work under EPA oversight, including a three year study of how activated carbon added to ENR areas might reduce the amount of PCBs available in the food web and a study of LDW fishers, to be finished by the end of 2016. In 2016, they agreed to add a survey of waterway users and sampling to update waterway conditions, given changes that have occurred since the sampling for the RI/FS. The timeline below outlines the phases of the EPA cleanup. More details about the cleanup process are provided in Appendix A.



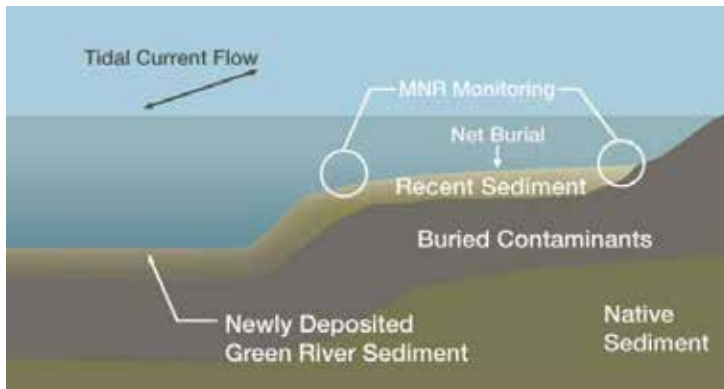
About the Site

Method of Cleanup

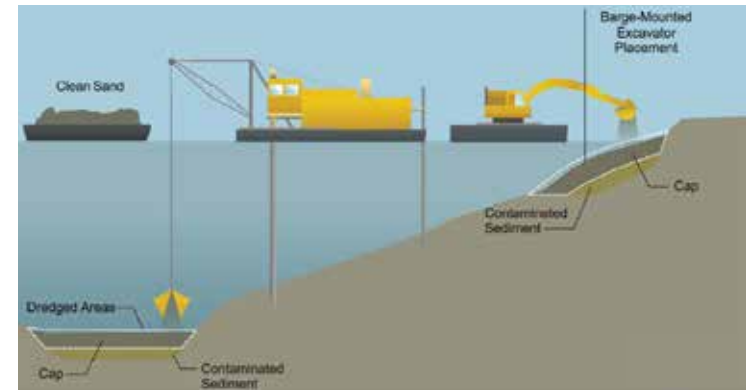
Below are descriptions of the various cleanup methods that will be used to clean up LDW sediment (the bottom of the river).



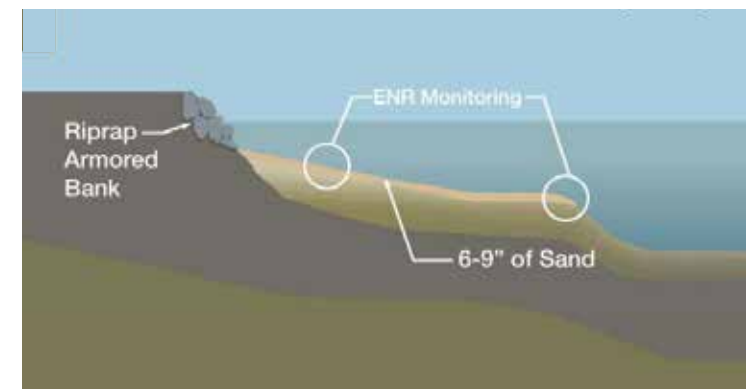
Dredging – removes contaminated sediments from the waterway. After removal, dredged material will be disposed in a permitted landfill.



Monitored Natural Recovery (MNR) – relies on the movement of cleaner sediments from upriver to cover contaminated sediments in the waterway. The sediments are monitored to measure the reduction in contamination over time.



Capping – covers the contaminated sediments with engineered layers of sand, silt, gravel and rock to contain and isolate the contamination.



Enhanced Natural Recovery (ENR) – uses a thin layer of sand to speed up the natural recovery process. Activated carbon or other materials may be included to make the remaining contamination less harmful to bottom-dwelling creatures. Pilot testing of this relatively new technology is ongoing.

About the Site



Source Control

Source control is the process of finding and then stopping or reducing releases of pollution. Source control for the LDW has two goals:

- 1) A near-term goal to control sources sufficiently to allow active in-waterway remediation to start; and
- 2) A long-term goal to minimize the risk of recontaminating sediments above the sediment cleanup standards established in the ROD, after sediment cleanup.

Ecology has the lead for control of upland contaminant sources. Examples of source control work conducted to date by Ecology and its source control partner agencies include source tracing and identification, upland site studies and cleanup, business inspections, street sweeping and line cleaning, and regulatory compliance assurance activities.

Over 250 confirmed or suspected contaminated upland sites have been identified within the LDW drainage basin, although only some of those are sources of contaminants to the LDW. As of June 2016, 17 sites along or near the LDW are under Agreed Orders for investigation and cleanup, administered by Ecology's Toxic Cleanup Program. Five additional sites in the LDW source area are under Agreed Orders for investigation and cleanup, administered by Ecology's Hazardous Waste and Toxics Reduction program. There are 273 voluntary cleanups under the Model Toxics Control Act (MTCA) that are occurring or are complete. These actions are distinct from upland and EAA cleanups completed or in progress under the EPA authorities.

As of July 2014, the City of Seattle, King County and Ecology had completed more than 4,700 inspections at nearly 1,900 businesses in the LDW area. In addition, they collected more than 1,110 solids samples from storm drains and catch basins to identify potential sources of pollutants to stormwater systems. For comprehensive accounts and up-to-date information, check the most recent Source Control Status Reports on Ecology's website at:

http://www.ecy.wa.gov/programs/tcp/sites_brochure/lower_duamish/lower_duamish_hp.html.

Ecology describes source control activities and concepts in the LDW Source Control Strategy (Strategy), originally published in 2004. A revised draft was published in December 2012 for public comment together with the EPA's LDW Proposed Plan. A final revised Strategy was released in June 2016 (<https://fortress.wa.gov/ecy/publications/summarypages/1609339.html>). This Strategy is an integral part of the cleanup and will guide continued efforts to locate and reduce sources of pollution and protect the in-waterway cleanup.

Please see Appendix B for a brief history of how the site became contaminated, industrial activities in the Duwamish Valley, and sources of contamination to the LDW.

About the Site

Fish Advisories

WA DOH issues fish advisories to protect public health and provide information about risks from eating contaminated seafood. Fish advisories are based on the levels of contaminants in fish tissue and potential impacts on health. The intent of fish advisories is to help people make informed decisions about consuming seafood from specific waterbodies. In 2003, WA DOH issued a fish advisory for the LDW due to high levels of contaminants, including PCBs. The advisory was updated in 2005 and is still in place. It recommends that no one eat crab, shellfish, or fish (except salmon) from the LDW. Salmon (except blackmouth salmon) are the healthiest choice because they spend a short time in the Duwamish River. However, many fishers continue to catch and consume resident fish and shellfish.

Since 2012, LDWG has been performing a Fishers Study with oversight by the EPA and Ecology to gather information from people who fish in the LDW, eat seafood caught there, or are knowledgeable about fishing and consumption. This information will help agencies improve the effectiveness of health messages and help people make healthier choices. Over the course of a year, 400 fishers on the LDW completed the survey, and 22 people participated in interviews. The Study found that fishers come from many population groups, including Asian and Pacific Islanders, Latinos, and other ethnic communities that have Environmental Justice (EJ) characteristics.

Institutional Controls:

Methods to reduce exposure to contamination instead of or in coordination with cleanup.

In 2002, the National Environmental Justice Advisory Council⁶ advised the EPA that relying on informational campaigns to reduce risks from consuming contaminated fish may not be effective or appropriate for communities with EJ characteristics. These communities may not have access to other affordable food sources. In light of this, the LDW ROD calls for effective and appropriate Institutional Controls (IC), ways to reduce exposure to contamination instead of or in coordination with cleanup, and recognizes that such controls must be tailored to the unique needs of the LDW fishing community given its EJ characteristics.

The EPA plans to use a community-based participatory process to develop ICs that are effective and appropriate for the LDW fishing communities. This approach aligns with the recommendations of both the EPA's National Environmental Justice Advisory Council and by an independently prepared Health Impacts Assessment.⁷ Both advise a community-based participatory approach to engage and empower affected populations and to foster meaningful public participation in the development of ICs.

The community-based participatory process to develop the ICs is not described in detail in this CIP, as the process is still in planning and will be focused on a very specific group that will comprise a Safe Fish Consumption Consortium. However, the EPA expects that the fishing community will be represented on the Lower Duwamish Waterway Cleanup Roundtable described in Section 4. The EPA recognizes that the fish consumption ICs may need to be changed over time since demographics and site conditions may change during active cleanup.



Above: Fish advisory for the Lower Duwamish River

3

Communities

3: Communities Affected by the Site

Native Americans of the Duwamish Tribe were the first residents of this area, and they lived along the river for thousands of years before non-Natives settled in the area. Today, the LDW borders culturally diverse neighborhoods, business, heavy industry, recreational areas, restoration areas, and subsistence resources.⁸

The neighborhoods most affected by the LDW site include Georgetown and South Park, which combined have roughly 5,300 residents.⁹ Other affected communities include people who fish, play, work, and otherwise use the LDW; many of these individuals come from other neighborhoods. There are significant Environmental Justice (EJ) concerns within the LDW since Tribes, residents of color, low-income residents, and subsistence fishers all rely on or interact with the LDW.

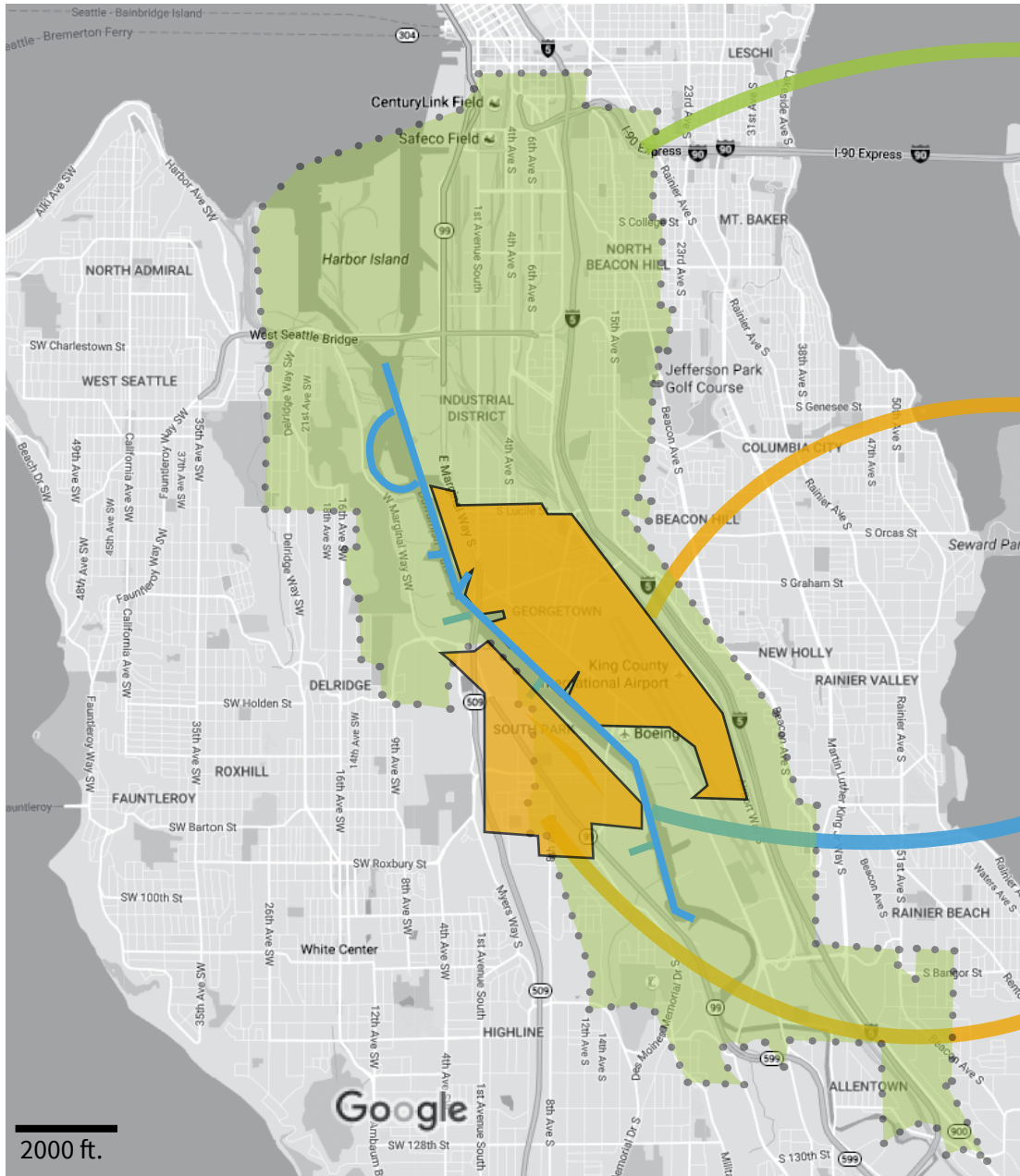
Neighborhoods in the Duwamish Valley have some of Seattle's highest percentages of people of color and low-wage workers.¹⁰ Page 15 shows the demographics of the Greater Duwamish Valley area in greater detail. As part of the cleanup plan, the EPA conducted its first-ever EJ Analysis. The Analysis identified many EJ issues affecting the communities who live in and come to use the LDW, including:

- High rates of regional seafood consumption for both Tribal and non-Tribal community members (including subsistence fishers);
- High levels of air pollution caused by industrial sources and nearby highways;
- Soil contamination and river sediment contamination;
- A lack of nearby grocery stores, parks, and green spaces; and
- Higher rates of asthma hospitalization and other chronic diseases, such as diabetes, than residents of other Seattle neighborhoods.

Three of the LDW communities with heightened EJ concerns include the Tribes, subsistence fishers, and low-income residents of color. For more information about EJ concerns in the Duwamish Valley, please see Appendix E.

Community Advisory Group (CAG): A CAG is a group that is made of representatives of diverse community interests. It provides a public forum for community members to present and discuss their concerns and needs related to the Superfund decision-making process.

Affected Communities



The Duwamish Valley

Census Tracts:
93 (SODO)
99 (N. Delridge)
108 (S. Delridge)
109 (Georgetown)
112 (South Park)
263 (Beacon Hill)
264 (N. Burien)

Georgetown

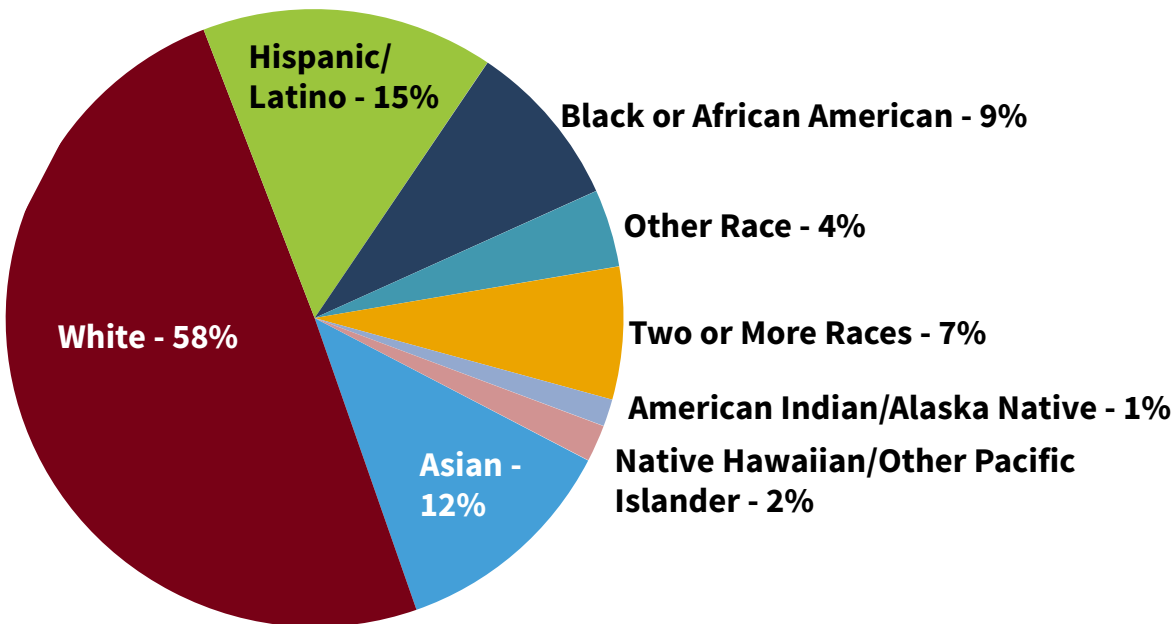
Lower Duwamish Waterway

South Park

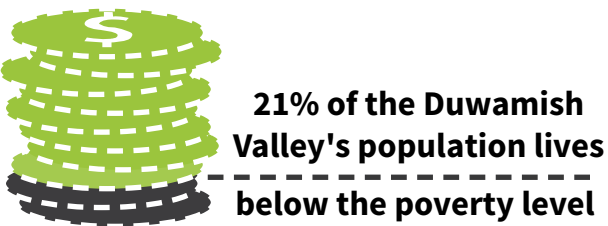
Affected Communities

Demographics of the Duwamish Valley¹¹

RACE/ETHNICITY



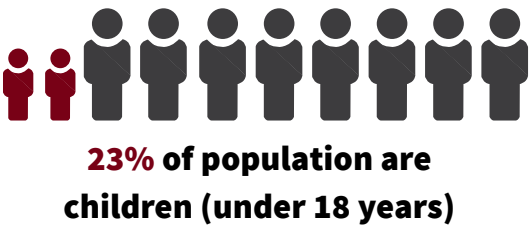
POVERTY



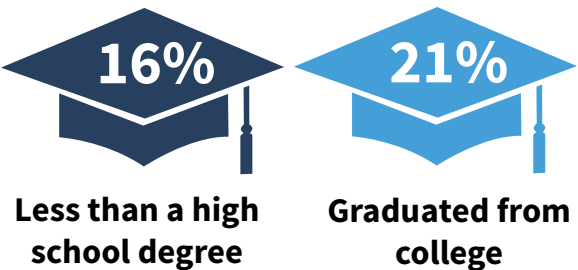
COUNTRY OF ORIGIN



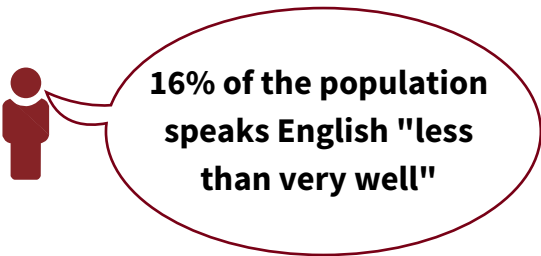
AGE



EDUCATION



LANGUAGE



Affected Communities

Neighborhoods

The neighborhoods most impacted by the cleanup are Georgetown and South Park and therefore, groups in these neighborhoods will be prioritized for outreach.

Georgetown

Location	The Georgetown neighborhood is located in South Seattle on the east side of the LDW and across the river from South Park.
History	Georgetown is Seattle's oldest neighborhood. Settled by Luther Collins and the Collins Party in 1851, it was home to one of the first groups of non-Native Seattle settlers. It was incorporated as the City of Georgetown from 1904-1910, and was later annexed by the City of Seattle.
Population	Approximately 1,079 people live in Georgetown. ¹²
Industries	The Georgetown neighborhood is home to large employers, such as the King County International Airport, and the Boeing Company, which was established on the banks of the LDW in 1910. The largest local employers are in the arts, entertainment, and recreation industries.
Foreign Born	Approximately 13% of Georgetown's residents were born outside of the US. ¹³
Community	The poverty level in Georgetown is 17%, which is slightly higher than in Seattle overall.

*Left to Right: Sign in downtown
Georgetown; boots and hat sculpture
in Oxbow Park in Georgetown*



Affected Communities

South Park

Location	The South Park neighborhood is located in South Seattle on the west bank of the LDW.
History	South Park was incorporated as the Town of South Park in 1902 and became part of the City of Seattle in 1907. South Park was once a small farming town composed of Italian and Japanese farmers who supplied fresh produce to Seattle's Pike Place Market. After the Duwamish River's curving meanders had been straightened, it was easier for industry to develop along the banks of the waterway. This change in the Duwamish River greatly altered the nature of South Park.
Population	Approximately 4,264 people live in South Park. ¹⁴
Industries	Today, a variety of retail and service businesses are located along 14th Avenue South. Data from the Seattle Office of Economic Development lists the primary categories of employment in South Park as wholesale trade, transportation and utilities, construction/resources, manufacturing, and services. ¹⁵
Foreign Born	Approximately 25% of South Park's residents were born outside of the US. ¹⁶
Community	South Park is one of the most diverse neighborhoods in King County. Interviewees who contributed to this CIP noted the community includes a large population of Latinos and Native Americans, as well as Asians, South Pacific Islanders and Russian-speaking groups. Of the children enrolled at South Park's Concord Elementary School, 83% qualify for free/reduced price lunch.

However, other people from other neighborhoods and areas who come to the LDW to fish, play and work are also impacted by the LDW cleanup.



Left to Right: Fiestas Patrias celebration in South Park; Taqueria El Rincon taco truck in South Park

Affected Communities

Tribes

The LDW is one of the locations of the Muckleshoot Tribe's commercial, ceremonial, and subsistence fishery for salmon, as part of its usual and accustomed fishing area. The Suquamish Tribe actively manages aquatic resources north of the Spokane Street Bridge, just north of the LDW. Consideration of how Tribal members may be exposed to contaminants in the LDW while engaging in seafood harvest activities has been a primary factor shaping the assessment of human health risks. The Tribes, as sovereign nations, have engaged in government-to-government consultations with the EPA and other government agencies on the cleanup process and decisions. The Tribes have also broadly and actively participated in meetings determining the course of the cleanup to date. The EPA will continue to consult with the Muckleshoot and Suquamish Tribes throughout design, construction, and long-term monitoring of the cleanup, including any potential modifications to the cleanup.¹⁷

The Duwamish Tribe has a long history in the area with deep connections to the Green-Duwamish Watershed. Members of the Duwamish Tribe have lived on the banks of the Duwamish River for thousands of years. Today, their Tribal home, the Duwamish Longhouse, is adjacent to the LDW. Although the Duwamish Tribe is not a federally recognized Tribe, the EPA seeks their input and involvement on the cleanup.

Certain historical and culturally significant areas in the LDW might be affected by cleanup construction. The EPA will work with Tribal governments and other government agencies and potentially liable/responsible parties to identify and protect native artifacts and burial grounds in the waterway upland cleanup areas. The EPA will take the lead on communication to directly contact Tribes about intended construction site locations.

Left to Right: Inside of the Duwamish Longhouse; Suquamish Tribal members perform a song; Model of a Muckleshoot winter house.



Source: Joe Mabel



Source: Jay Inslee Flickr



Source: Joe Mabel

Affected Communities



Above: Informational booth about fishing in the LDW at the 2016 Duwamish Festival

Fishers on the LDW

Fishing is a very popular activity for some on the LDW for a variety of reasons, including:

- Cultural and traditional practices;
- Recreation and relaxation;
- Convenient and inexpensive source of healthy and culturally relevant food; and,
- Opportunity to spend time with friends and family.

Many people fish for migratory salmon in the LDW as well as other kinds of fish, crabs, clams, and mussels. Resident fish and shellfish carry a high load of PCBs and/or other contaminants because they spend their lives in the LDW. As noted in Section 2 under “Fish Advisories,” the WA DOH recommends that no one eat crab, shellfish, or fish (except salmon) from the LDW because pollution makes them unsafe to eat. It is clear that, in spite of these fish advisories, many fishers continue to catch and consume resident fish and shellfish.

The Fishers Study discussed in the “Fish Advisories” section shows that LDW is fished by people from a broad geographic area, including West Seattle, South Seattle, White Center, Burien, Tukwila, Central Seattle, North Seattle, the Eastside, south of Seattle, and north of Seattle. The study indicates that fishers come from many population groups, including Asians, Pacific Islanders, Latinos, and other ethnic communities.

The use of ICs within the LDW must be tailored to the unique needs of the LDW fishing community given its EJ characteristics. To develop ICs that are appropriate and effective for the LDW fishing community, the EPA will use information gathered through the Fishers Study and other relevant projects to develop and implement a community based participatory process to identify, pilot, and develop ICs.



Above: Fish advisory near the LDW.

Affected Communities

Community Concerns and Requests

This plan is designed to align with the needs of those interested in and impacted by the cleanup. To tailor the plan, the EPA asked interested parties about their views of the cleanup and how they want to be informed and involved. To guide the update of this CIP, the EPA conducted the following outreach in the summer of 2015:

- Interviews with federal, state, and local government agencies;
- Interviews with the Suquamish, Muckleshoot, and Duwamish Tribes;
- Interviews with community groups (including DRCC/TAG, the EPA-recognized CAG);
- Informal drop-in sessions with residents at local gathering spots (libraries, cafes, etc.);
- Presentations at community meetings; and
- An online survey in English and Spanish.

Throughout this outreach, the EPA heard a number of interrelated requests.

Right: Wordcloud generated by the responses from interviewees during the summer of 2015.

The EPA heard a lot of concerns regarding the natural environment, including air pollution, climate change, green space, and environmental injustices. Interviewers also heard that community and business members were worried about health risks from the contaminants in the LDW and wanted to see the formation of a community health fund. Many interviewees wanted to see the LDW as a source of safe and fun recreation (i.e. kayaking, beaches, etc.). Others emphasized the importance of effective and language-appropriate fish advisories to ensure safe seafood consumption, as well as improved fishing piers and cleaning stations. Residents and employees working near the LDW requested that the EPA mitigate the construction impacts

associated with the cleanup, including noise, light, traffic, and pollution. Several noted that mitigation could include using “green” remediation practices. Overall, the EPA heard that it was important for the cleanup to yield tangible benefits for the existing communities and businesses. The EPA heard that community members were concerned about rising land values and displacement as a result of the cleanup, causing “eco-gentrification.” Businesses wanted assurance that the cleanup would accommodate current and future operational needs of waterfront businesses. Interviewees frequently commented on the importance of this cleanup generating living wage and “green” jobs in the local community.



Affected Communities

Residents and businesses wanted to be updated on the cleanup process through various methods – TV, radio, social media, emails, in-person meetings, interactive websites (such as HeyDuwamish.org), art events, informational kiosks, local offices, door-to-door outreach, school-based events, and “office hours” in local gathering places (cafes, food trucks, etc.). In-person meetings should be at convenient locations and times, with childcare, food, and translators to better enable community members to attend. The EPA also heard that it was important to hold meetings in non-English languages if needed. Lastly, the EPA heard the importance of coordinating outreach with other government entities so as not to overburden community members and businesses.

The EPA will consider these and other community requests, and may be able to implement those that are consistent with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and the National Contingency Plan (NCP). For more details on what the EPA heard through its interview process, please see Appendix I.





Right: Kayakers on the Duwamish River

4

4: Community Involvement Tools and Activities





This CIP identifies the tools that the EPA will use to promote greater public participation and awareness during the design and implementation of the cleanup. They were selected based on the identified community needs in the LDW, recommendations from stakeholder interviews, feedback received during the public comment period on the EPA's proposed cleanup plan, and other interactions throughout the cleanup process.

The tables on the following two pages outline what the EPA heard from its outreach, as well as the associated tools and activities it will consider to address what it heard.

Category	What the EPA Heard from Outreach	The EPA's Tool/Activity
1. Joint Coordination 	"Government agencies need to work together to provide clear and consistent answers to our questions."	<ul style="list-style-type: none"> • Coordinate with Ecology and other state and federal agencies working on health and natural resource issues • Coordinate with DRCC/TAG • Coordinate with Tribes • Coordinate with Potentially Responsible Parties (PRPs)
2. EPA will go to Community Places, Events, and Meetings 	"The EPA needs to come to where communities already gather to provide updates on the cleanup."	<ul style="list-style-type: none"> • Give presentations at neighborhood association meetings • Conduct door-to-door outreach • Host tables and give presentations at community events • Make presentations at schools • Provide updates at Tribal Council meetings • Reach out to community members in other venues (soccer practice, places of worship, movie screenings, etc.)

Tools & Techniques

Tools and Techniques

Category	What the EPA Heard from Outreach	The EPA's Tool/Activity
3. EPA will Invite the Community to Meetings/Events it Organizes 	"The EPA should host a variety of informative, accessible, language-appropriate, and convenient meetings."	<ul style="list-style-type: none"> • Host informal meetings, such as public information sessions • Host formal public meetings • Hold "office hours" in locations in the Duwamish Valley on a regular basis
4. Groups 	"Convene, collaborate with, and support Duwamish-related groups."	<ul style="list-style-type: none"> • Continue convening the Duwamish Stakeholders Group • Continue convening the Tribes, Trustees and Communities Group • Continue convening the Duwamish Community Involver • Continue working with DRCC/TAG as an EPA-recognized Community Advisory Group (CAG) • Launch the Lower Duwamish Waterway Cleanup Roundtable
5. Media 	"Use a range of old and new media (in multiple languages) in order to share updates or solicit feedback regarding the cleanup."	<ul style="list-style-type: none"> • Maintain an Information Repository • Produce user-friendly fact sheets and flyers • Send out informational hard-copy mailings • Send out informational emails • Maintain an up-to-date website • Use social media, such as Facebook, Twitter, and NextDoor, to provide updates • Distribute public notices and news releases to diverse media contacts • Design maps, create videos, and develop other visual aids
6. Technical Assistance and Economic Development 	"The cleanup should lead to quality jobs and economic opportunities for local residents."	<ul style="list-style-type: none"> • Encourage community groups to apply for the Technical Assistance Services for Communities (TASC) • Encourage community groups to apply for the Technical Assistance Grant (TAG) • Establish Superfund Job Training Initiative (SuperJTI) program in the Duwamish Valley and encourage community members to apply for training • Encourage community groups to apply for the Environmental Workforce Development and Job Training (EWDJT) program • Encourage community groups to apply for the Superfund Redevelopment program
7. Updates to CIP	"Keep the CIP current and responsive to changing needs."	<ul style="list-style-type: none"> • Update the CIP as needed

Tools and Techniques



1. Joint Coordination: Coordination with Government, Tribes, Community Groups and Other Entities

The EPA works with a variety of agencies, organizations, Tribes and PRPs to update community members and other interested groups about the status of the cleanup plan and to seek their input. The EPA will continue this effort throughout the cleanup process, while acknowledging that other entities' funding or other factors might limit their ability to participate fully.

Potentially Responsible Party (PRP): Any individual or company - including owners, operators, transporters or generators - potentially responsible for or contributing to a spill or other contamination at a Superfund site. Whenever possible, through administrative and legal actions, the EPA requires PRPs to clean up hazardous sites for which they are responsible.



Right: Logos from some of the various entities that the EPA will coordinate with throughout the cleanup process.

Tools and Techniques

Avoiding Overload

The EPA understands there is a risk of community fatigue over the life of the cleanup; thus the EPA will try to keep LDW community involvement specific and targeted to the issues that matter most to community members. The EPA will also gauge the frequency of notification based on the phase of the process. For example, updates may be less frequent when there is less activity (updates may be every three months, for example).

During the remedial design process and especially during construction of the cleanup, the EPA may engage with communities on an increased basis (monthly, weekly, or even daily depending on the kind of activity with the cleanup).

In addition, community members can set their own notification preferences through the listserv (a communications tool).

Washington State Department of Ecology

While the EPA and Ecology have distinct roles and responsibilities with the LDW cleanup, many community members do not see the EPA and Ecology's work as separate. They just want answers about the LDW. The EPA and Ecology's Memorandum of Understanding (MOU) from 2004 set forth federal and state responsibilities for the LDW cleanup and source control. A 2014 Memorandum of Agreement (MOA)¹⁸ expands the coordination and cooperation effort to include additional EPA Region 10 and Ecology programs, particularly the water quality programs. Ecology, as the lead for LDW source control, uses a variety of regulatory tools to identify and control sources of pollutants. These regulatory tools often have distinct public involvement requirements that Ecology must follow. This MOA acknowledges that both source control and the in-waterway cleanup are complex, and describes a collaboration framework between agencies to coordinate the in-waterway cleanup and source control.

The 2004 MOU and 2014 MOA outlined the ways the two agencies will coordinate on community involvement. As community involvement for the cleanup is a joint effort between the EPA and Ecology, the two agencies will coordinate in-water and upland public outreach and involvement, as well as coordination with the site CAG, which is DRCC/TAG. The EPA Community Involvement Coordinator (CIC) is responsible for community involvement activities required under CERCLA, and the Ecology Community Outreach Environmental Education Specialist (COEES) is responsible for source control and MTCA outreach activities.

Local, State, and Federal Public Health Agencies

The cleanup of the LDW is intended to provide long-term health improvements. However, there is some potential for short-term health concerns associated with cleanup construction. The EPA's health partners are already working in the LDW communities on different projects to promote healthy living and well-being. Health agencies involved in this area include Public Health – Seattle and King County, PHSKC (local government agency); the WA DOH (state government agency), and the Agency for Toxic Substances, and Disease Registry, ATSDR (federal government agency). As health agencies, they are seen by communities and individuals as trusted sources of information. The EPA will engage these agencies as they develop health messages and strategies for reaching out to the LDW and fisher communities.



Tools and Techniques



Posters from DRCC/TAG events.

Sources: DRCC/TAG

Duwamish River Cleanup Coalition/Technical Advisory Group

The Duwamish River Cleanup Coalition/Technical Advisory Group (DRCC/TAG) was founded in 2001. DRCC/TAG includes both a Board of Directors, made up of individuals, and an Advisory Council, made up of coalition organizations and groups. The coalition includes two neighborhood associations (South Park and Georgetown), the Duwamish Tribe, ECOSS and a number of other environmental and social justice groups. DRCC/TAG serves several roles in its work related to the Duwamish cleanup:

- Community Advisory Group: Community Advisory Groups (CAGs) are formed at some Superfund cleanup sites to facilitate and foster communication between the community and the EPA. A CAG is a self-forming, voluntary group whose primary purpose is to serve as a forum for the exchange of information and to create dialogue between the EPA and the community so that concerns and viewpoints can inform the decision-making process at a site. Since 2002, DRCC/TAG has served as the EPA-designated CAG for the site and continues to serve as a CAG today.
- Technical Assistance Grant Recipient: DRCC/TAG was formed into a formal non-profit organization in order to receive a Technical Assistance Grant (TAG) from the EPA. DRCC/TAG uses the grant to hire technical advisors who review EPA documents and to provide briefings to community members. The TAG grant also funds DRCC/TAG newsletters and other similar materials that explain LDW Superfund site issues to community members.¹⁹
- Advocacy Group: DRCC/TAG advocates for a cleanup that restores the environmental health of the river, protects the fishers and families who use the river, and reflects the priorities, values, and will of the people who live and work in the region. DRCC/TAG is widely regarded as being effective in informing and engaging the community, and has initiated a number of projects that address environmental and public health issues beyond the scope of the Superfund cleanup, such as their Duwamish Valley Youth Corps and the Healthy River/Healthy Communities project.

DRCC/TAG has been supported through funding from individuals, government grants, and foundations. Inconsistent funding sources can significantly impact the group's ability to fully engage in the public process and act as an effective CAG.²⁰



Source: DRCC/TAG

Above: The Duwamish Valley Youth Corps at work in the community.

Tools and Techniques



Above: The side of a Duwamish Tribal canoe.

Tribes

The Muckleshoot and Suquamish Tribes, as federally-recognized Tribes, have engaged in government-to-government consultations with the EPA on the cleanup process and decisions. The EPA has formally consulted with the Muckleshoot and Suquamish Tribes at key points during the investigation, analysis of alternatives, and cleanup selection phases. The Tribes have also broadly and actively participated in meetings to date. The EPA will continue to consult with the Muckleshoot and Suquamish Tribes on a government-to-government basis and will closely coordinate with them throughout design, construction, and long-term monitoring of the LDW cleanup. The EPA will rely on the Tribal representatives to relay information on the cleanup to their membership.

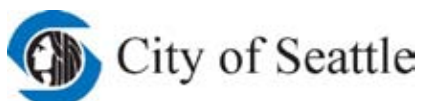
While the Duwamish Tribe is not a federally recognized Tribe, the EPA also seeks their input and involvement on the cleanup. In sharing information, the EPA is available to give presentations at Duwamish Tribal Council Meetings. The EPA will also request to publish articles and/or share information in *The Duwamish Drum*, a quarterly publication of the Duwamish Tribal Services. The Duwamish Tribal Services' annual fair in November is also a potential venue where the EPA could share information with members of the Duwamish Tribe.

The EPA hopes that the Tribes remain actively involved in the various groups that both exist and that may be formed (like the proposed Lower Duwamish Roundtable, see page 36) so that their perspectives and input can be considered.

Potentially Responsible Parties

LDWG and other PRPs performing EAA cleanup work have independently initiated community outreach and involvement efforts. Public entities that are also PRPs, such as the City of Seattle and the Port of Seattle, may have independent obligations and policies to involve the public for specific projects (such as a capital construction project) or programs (such as municipal stormwater management programs) that implement an aspect of source control. The EPA will continue to coordinate community involvement work with them in the future. In addition, representatives from PRPs will be included in the Lower Duwamish Roundtable, which is described in greater detail on page 36.

Right: Logos belonging to the members of LDWG.



Tools and Techniques

Collaboration in Action

The EPA's outreach efforts have benefited from collaboration on outreach with DRCC/TAG, Ecology, the PRPs and other entities. Such coordination is particularly helpful given limitations on the kind of support or resources the EPA, as a federal agency, can provide. For example, for a ROD informational open house, DRCC/TAG provided childcare and the Port of Seattle provided food. Providing food and childcare enables more participants to attend the events. Coordination with other entities can also provide valuable insights into communities and can improve communication with the public. As another example of collaboration, the Port of Seattle has hosted annual boat tours of the LDW that are both popular and informative.

The public deserves answers to their questions about the LDW cleanup. The EPA will strive to work with the many entities involved in this cleanup to ensure that information regarding the cleanup is clear and consistent. The EPA will also seek to provide clarity on each entity's role and responsibilities in the cleanup process.

The EPA appreciates and recognizes the important roles that other government agencies and community groups play in the implementation of this CIP. As such, these agencies and groups need adequate resources and funding to fully engage communities throughout the cleanup process.



Above: EPA fact sheet in Vietnamese
Source: https://www3.epa.gov/region10/pdf/sites/ldw/factsheet_duwamish_rod_vietnamese.pdf

Speaking Your Language

In working with non-English speaking communities, the EPA will provide translation of certain documents and interpretation services for some meetings and presentations. As appropriate, the EPA will host non-English language meetings as it did with DRCC/TAG in 2013 when they hosted the nation's first non-English language public meeting related to a Superfund site cleanup. Translation will be provided primarily in Spanish and Vietnamese, as well as other languages, as needed. As part of the translation process, it was recommended that a community member review all translated documents to ensure language nuances are correct. When possible, the EPA will use local community members to provide language services. Regarding multilingual outreach, interviewees suggested including translation into the following languages: Spanish, Vietnamese, Russian, Ukrainian, Chinese, Japanese, Cambodian, Tagalog, and other Pacific Islander languages. The EPA has worked with DRCC/TAG in the past and will continue to work with them into the future to ensure language accessibility for all interested communities. Further information on outreach to diverse communities is detailed in Appendix F.

Tools and Techniques



2. The EPA will go to Community Places, Events, and Meetings

The EPA understands it is important to do small-scale outreach to reach community members who might not usually attend a formal meeting about the cleanup. As such, the EPA will go to places, events, and meetings where community members already gather.

Neighborhood Associations

The EPA recognizes the importance of attending community meetings in order to stay involved in the community. Based on the phase of the cleanup process, the EPA will gauge the frequency of its attendance at the monthly meetings of the South Park Neighborhood Association (SPNA) and the Georgetown Community Council (GCC) as well as the regular meetings of the Highland Park Action Committee, the North Beacon Hill Council, and other neighborhood groups. By attending these neighborhood meetings, the EPA can update attendees on cleanup progress, and attendees have an opportunity to ask questions and convey concerns to the EPA.

Additionally, as many of these associations and groups maintain their own listservs and their members have access to neighborhood forums on Facebook, NextDoor and similar social media, the EPA will send messages to neighborhood associations for them to share through their listservs. Some residents might prefer to receive information from their community sources instead of from the EPA's listserv.

Informal Briefings and Presentations to Other Groups

In addition to attending neighborhood associations' meetings, EPA staff members are available to meet with local officials, stakeholder organizations, community or business leaders, media representatives, and others to provide briefings on LDW cleanup progress, or provide information about upcoming LDW cleanup activities that may generate interest or questions. The EPA will make every effort to accommodate these requests, based on staff availability. The EPA can also work with Ecology and DRCC/TAG to make these presentations.

Door-To-Door

During field work or construction in the LDW, the EPA and/or PRPs will consider door-to-door notification. While a great deal of public involvement can and will be shared in areas directly affected by cleanup activities, going door-to-door is a better way to reach residents. Particularly for neighborhoods where most of the residents are renters, like Georgetown, a door hanger with information or alerts can be more effective in directly reaching those who reside in the area.



Above: Logos of some of the neighborhood associations that the EPA will reach out to throughout the cleanup process.

Tools and Techniques



Sustainable Solutions for All



Schools and Educational Outreach

The EPA will make project information available to interested schools to assist them in developing educational projects related to the LDW Superfund site. Educators and students may call the EPA's Community Involvement Coordinator, Julie Congdon at 206-553-2752, for information or to request a visit to their school from an EPA representative.

Working with schools can be a good way to get connected with communities; this is especially true with Concord International School, the only school in Georgetown and South Park. To ensure teacher participation, activities need to correspond with what the teachers have to achieve with curriculum requirements. One recommendation the EPA received is to coordinate with the EPA Dive Team when they engage in sampling activities in the LDW; with these activities, the EPA would seek to involve school children so they can see what the work involves, the science of the work, and how it all relates to the cleanup.



Source: DRCC/TAG

Towards that end, the EPA can work with local organizations such as Just Health Action, ECOSS, and the Duwamish Valley Youth Corps (a program of DRCC/TAG), to utilize such programs as the Partners in Technical Assistance Program (PTAP) to develop curriculum and other educational and outreach materials for public information. This program expands opportunities for cooperation between the EPA and colleges and universities, such as the University of Washington, with the shared goal of assessing and addressing the unmet technical assistance needs of impacted communities near Superfund sites.

The EPA will also seek to partner with the University of Washington's Superfund Research Program (SRP) to facilitate community engagement in the cleanup. The program funds university-based multidisciplinary research on human health and environmental issues related to hazardous substances. The University of Washington's program is available to assist on such needs as research translation and community engagement.

The EPA will also educate residents and businesses about institutional controls for the cleanup to provide for long-term effectiveness and permanence of the cleanup. Educational campaigns are important since as has been determined through previous studies, advisories on signs alone are not effective for subsistence fisher populations.^{21, 22, 23}

Tools and Techniques

Community Events

The EPA will continue to attend or provide materials for community events such as fairs, festivals, and other activities to distribute information and answer questions. There are a variety of events that happen in the Duwamish Valley that have been good venues for connecting with the community.

Duwamish River Festival

DRCC/TAG organizes and manages this annual event in the Duwamish Waterway Park in the South Park neighborhood. The EPA has been co-sponsoring and helping to organize this annual festival since 2005, although in a diminishing role as other organizations have taken on coordinating the event. The festival attracts hundreds of families each year and has become an important feature of the community. It provides an opportunity for the EPA to interact with community members who might not normally attend a public meeting.

Duwamish Alive

This is a semi-annual habitat restoration event that happens in April and October at various sites along the LDW. The event is organized by the Duwamish Alive Coalition, which is a collaborative effort of local communities, municipalities, non-profits, and businesses within the Duwamish Watershed to preserve and enhance habitat for people and wildlife. The event involves hands-on habitat restoration and outreach activities in the Duwamish River Watershed with the greater Seattle community.



Source: DRCC/TAG

Duwamish River Festival



Source: DRCC/TAG

Duwamish Alive

Tools and Techniques

Right: Sidewalk art incorporated into Terminal 117 (T-117) street and stormwater work.



Art

The EPA recognizes that the integration of art into infrastructure and community projects can be effective in educating and engaging community members. The Duwamish Revealed arts program focused on the river, which had been literally and figuratively hidden from view for a long time. In the past, DRCC/TAG worked with the Concord International School to host an art competition in conjunction with public meetings on the cleanup. This was effective as it drew parents to see the artwork produced by their children to an event where they could also learn about the cleanup progress. When possible, the EPA will try to incorporate art projects into its community outreach work.

Other Venues

In reaching families in the South Park area, and in particular Latino families, another suggestion is to attend local soccer practices, particularly those teams that are sponsored and/or coached by SeaMar Community Health Center staff. It is also important to conduct outreach at the local food bank, especially in reaching Spanish speakers. Churches, temples and other places of worship can be good venues for outreach and information sharing.

In neighborhoods like South Park, Georgetown, Beacon Hill, Tukwila, West Seattle, and White Center, the EPA will seek out “hubs” in the community to conduct outreach and post information. Some examples for “hubs” include restaurants, libraries, community centers, merchant associations, food trucks, community gardens, rowing clubs, community colleges, cafes, and senior centers.

Tools and Techniques



3. The EPA will Invite the Community to Meetings and Events They Organize

Informal Meetings

Public information sessions are effective, informal sessions open to the general public. They feature posters, displays and interaction between the EPA staff and the public. These sessions present detailed information in understandable terms, allow individuals to inquire about issues that most concern them, and afford each community member a chance to speak freely to the EPA personnel on a one-to-one basis. Public information sessions also provide the EPA with feedback from the community and can uncover issues not fully understood by the community. These sessions will be conducted as needed at convenient times and places for community members. Whenever possible, the public will be notified about the session at least one month in advance of the event. Public information sessions do not require the use of court reporters and transcripts, although meeting summaries may be prepared. The goal of these sessions is to inform the public on important project issues and to enable community members to ask questions in a comfortable and informal setting. The EPA has worked with DRCC/TAG in the past to host public information sessions, and will continue to do so in the future.

Informal and fun activities (such as the pizza parties the Port of Seattle held for “pocket communities” that were directly affected by the T-117 cleanup construction) can be very effective. In the main commercial area of South Park, posting flyers on utility poles to get the word out about meetings and information on the cleanup is recommended.

There are various aspects that can make events more inviting to the public. Alternately, if there can be a learning or skill-building component to a meeting or workshop, people may be more interested in attending. While the EPA cannot provide monetary compensation, food, or childcare due to federal regulations, the EPA understands that all of these can increase participation when provided. Childcare is important to make community events family-friendly and accessible. It can be important to have activities that can engage children too (e.g. interactive toys provided for kids). The EPA will strive to hold events at times that are convenient for the public, both during the day and in the evening, and will work with other groups who may be able to offer meals, childcare, or other incentives.

Formal Meetings

Formal public meetings are structured meetings that are required by law or regulation. They are open to the general public, featuring a presentation and interaction. Public meetings are opportunities to update the community on site developments, address community questions, and hear concerns, ideas, and comments. The EPA is required to give public notice at least one month before a formal public meeting. Formal public meetings may involve the use of a court reporter and the issuance of transcripts. In the past, under CERCLA, the EPA conducted formal public meetings for the LDW cleanup’s Proposed Plan and ROD. Moving forward, the EPA will hold formal meetings as required by CERCLA, for example, a “public briefing” is required by CERCLA when the EPA completes the design of the cleanup remedy.²⁴



Above: The 2015 public meeting for the rollout of the final cleanup plan, also called the Record of Decision (ROD)

Tools and Techniques



4. Groups

There are a few groups that have regular meetings regarding cleanup-related issues. Their meetings fall outside the types of meetings noted in the previous section. Descriptions of these groups are below.

Duwamish Stakeholders

Starting in 2007, the EPA established technical meetings. The Duwamish Stakeholders meetings are open to the public and are attended by a broad range of stakeholders, including PRPs and community groups. At these meetings, the EPA typically provides updates on the implementation of the final cleanup plan, work being done at EAAs, public involvement and other EPA-led efforts; Ecology provides updates on its source control activities; and DRCC/TAG provides updates on its community-based work. Moving forward, these meetings will likely be held semi-annually.

The location and timing of these meetings are not always easy for neighborhood members as they are often daytime meetings held in downtown Seattle, a location that is not convenient and does not have affordable parking for community members. Thus, the EPA will consider holding evening Duwamish Stakeholders meetings in the Duwamish Valley.

Tribes, Trustees, and Communities (TTC) Group

The purpose of the TTC is enhanced public participation for community groups, agencies, and Tribes. The TTC has typically met on a quarterly basis to discuss technical updates from the EPA and Ecology, and they will continue to meet quarterly into the future. Membership in TTC includes: US Army Corps of Engineers, US Department of Fish and Wildlife, ATSDR, WA Department of Natural Resources, DRCC/TAG, Ecology, Duwamish Tribe, ECOSS, the EPA, the Muckleshoot Tribe, NOAA, Puget Soundkeeper Alliance, the Suquamish Tribe, WA DOH, and various other neighborhood associations and environmental organizations.

Duwamish Community Involvers

This group was convened to effectively coordinate outreach among the EPA, Ecology, health agencies, the PRPs and community groups during public participation phases in the cleanup process, especially during the Proposed Plan public comment period. The group continues to meet every other month, with the purpose of coordinating involvement efforts, sharing information about the work each is doing with communities in the Duwamish, and ensuring that outreach efforts do not conflict or confuse the public. This group will continue meeting regularly in the future, throughout the active phases of the cleanup.



Above: A 2016 Duwamish Stakeholders meeting

Tools and Techniques

Community Advisory Group: Duwamish River Cleanup Coalition/Technical Advisory Group

Community Advisory Groups (CAGs) are formed at some Superfund sites to facilitate and foster communication between the diverse interests in the community and the EPA. A CAG is a self-forming, voluntary group whose primary purpose is to serve as a forum for the exchange of information and to help create dialogue between the EPA and the community so that concerns and viewpoints can inform the decision-making process at a site.

Community, neighborhood, environmental, Tribal and small business organizations came together in 2001 and founded DRCC/TAG. After this group was formed, the EPA designated it as the CAG for the Lower Duwamish Superfund site. Moving forward, DRCC/TAG will continue to serve as a CAG to the EPA. The group hosts guided river tours, educational forums, habitat restoration events, river festivals, youth programs, and neighborhood activities. Through the TAG program, DRCC/TAG helps the community understand technical information about the site. Technical experts funded by DRCC/TAG through the TAG program review LDW site-related documents and explain site information to the community.

In addition to the work DRCC/TAG does as a coalition, which includes sharing information through their website and newsletters, organizing community events, networking with others on community and environmental issues, raising awareness of the LDW, and reaching out to communities with limited English proficiency, etc., DRCC/TAG has helped the EPA reach out to the community to ensure meaningful input on the Proposed Plan and awareness of the ROD. DRCC/TAG has joined project meetings and provided input to the EPA directly and through regular stakeholder meetings and TTC meetings.

To learn more about or to become involved in this group, visit www.duwamishcleanup.org, call (206) 954-0218 or email contact@duwamishcleanup.org.



Source: DRCC/TAG

Above: A 2015 kayak tour led by DRCC/TAG.

Tools and Techniques

Lower Duwamish Waterway Cleanup Roundtable

Background

Section 13.2.8 of the ROD states: “Environmental Justice concerns will be addressed before, during and after implementation of the remedy through means that include...Continuing to engage the community throughout remedial design and implementation of the cleanup, including convening an advisory group as a means for the affected community and local agencies to work together on addressing the impacts of the cleanup on the affected community” (emphasis added).

During the interviews leading up to the update of this CIP, the EPA asked interviewees about the purpose and structure of the “advisory group” mandated by the ROD. In general, the EPA heard two main responses: (1) DRCC/TAG should continue functioning as a CAG for this cleanup site; and (2) there needs to be an additional group with broader membership than DRCC/CAG to also provide recommendations to the EPA. As a result of the interviewees’ suggestions, the EPA will continue working with DRCC/TAG as a CAG, but the EPA will also convene a Lower Duwamish Waterway Roundtable (Roundtable) that will have a broader membership than DRCC/TAG. Notably, the Roundtable will include PRPs such as King County, the City of Seattle, the Port of Seattle, The Boeing Company, and other businesses listed as PRPs. This broader membership will enable a range of interests to come together to make recommendations to the EPA during the design and implementation of the cleanup.

In the EPA’s experience of working with the communities affected by the cleanup, stakeholder views differ based on geography, culture, socioeconomic status, and other influences. A neutral facilitator helps ensure that all views and voices are expressed.

Prior to initiating the Roundtable, the EPA and a neutral facilitator will convene a Roundtable Organizing Committee to further refine and discuss the structure, focus, and protocols of the Roundtable.

Function and Purpose

The goals of the Roundtable will be to:

- Provide recommendations to the EPA, as well as other agencies and organizations, to develop the best possible cleanup design and implementation;
- Act as an inclusive, neutral, and transparent forum for input from all stakeholders - Tribes, residents, businesses,²⁵ industries, neighborhood groups, government agencies,²⁶ waterway users, fishers, and others;
- Act as a means of providing good-faith communications, understanding, and information on topics related to the Superfund cleanup;



Above: Duwamish Revealed art piece by Ben Zamora called "Alone. Standing. In the Middle of Darkness. Invisible."

Tools and Techniques

Limits of Roundtable

It is important to note the limitations of the Roundtable. For example, the Roundtable will not take the place of:

- DRCC/TAG's function as a CAG;
- Government-to-government Tribal consultation with the Suquamish and Muckleshoot Tribes;
- Formal public involvement and public comment opportunities that the EPA and Ecology would otherwise do;
- The proposed Safe Fish Consumption Consortium (see page 12); or
- The Tribes, Trustees, and Community Group.

- Seek creative solutions to mitigate LDW cleanup construction impacts (e.g. traffic, noise, light, impacts on Tribal activities, air quality, water quality, waterfront business operations, fishing, recreation, and quality of life); and
- Identify opportunities for potential ways to benefit the neighborhoods affected by the cleanup, within the parameters of the Superfund site cleanup.

Interest Groups and Representation

The EPA has identified 12 interest groups to have representatives on the Roundtable. The EPA recognizes that the time commitment necessary to participate fully as a stakeholder in the cleanup goes beyond what most community members, business owners/workers, and government staff members can offer, and is especially burdensome for disadvantaged communities. Because of this, the Roundtable will provide opportunities for representative participation. In other words, each interest group will have one to six representatives at the table. The table on the next page outlines the proposed interest groups and descriptions of possible representatives.



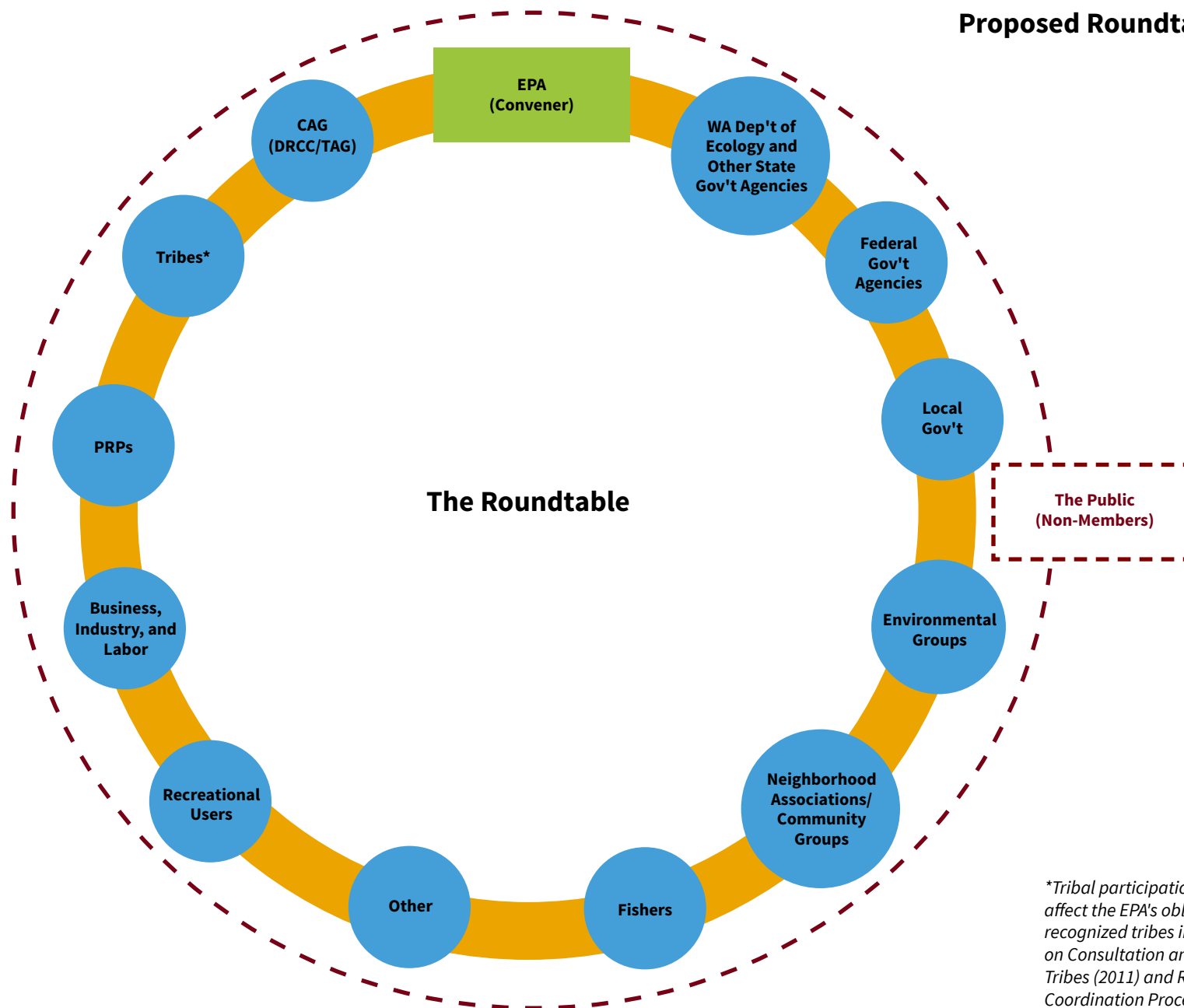
Tools and Techniques

The table below and graphic on the following page outlines the proposed interest groups and descriptions of possible representatives for the Roundtable.

Proposed Interest Groups	Possible Representatives (some or all may be listed)
CAG	DRCC/TAG.
Neighborhood Associations/ Community Groups	Groups that are not members of DRCC/TAG, such as food banks, health clinics, and/or refugee groups.
Potentially Responsible Parties (PRPs)	Seattle Public Utilities (SPU), King County Wastewater Treatment Division (WTD), the Port of Seattle, The Boeing Company, other parties listed as PRPs.
Local Government	Local government departments not acting in their capacity as PRPs, such as Public Health Seattle-King County and the Seattle Department of Neighborhoods, and small cities that are not listed as PRPs.
State Government Agencies	Ecology and other Washington State government agencies involved with the LDW cleanup process.
Federal Government Agencies	US Government agencies involved with the LDW cleanup process.
Business, Industry and Labor	Businesses that are not listed as PRPs.
Tribes	The Muckleshoot Tribe, the Suquamish Tribe, and the Duwamish Tribe (not-federally recognized). For this interest group, each Tribe will have its own representative.
Environmental Groups	Environmental advocacy and education groups (not part of DRCC/TAG).
Recreational Users	River recreation groups (not part of DRCC/TAG).
Fishers	Members of the EPA's future Safe Fish Consumption Consortium, see page 12.
Other	Groups affected by or involved in source control and/or the Superfund site cleanup. For example, the Health Impacts Assessment ²⁷ included a recommendation to establish a Community Health Task Force to identify and take actions to improve community health in South Park, Georgetown, and the Greater Duwamish Valley. If such a Task Force is formed, a representative from that group may be an appropriate addition to the Roundtable. It was also suggested that youth participate in this Roundtable if interested.

Tools and Techniques

Proposed Roundtable Interest Groups



**Tribal participation on the Roundtable does not affect the EPA's obligation to consult with federally-recognized tribes in accordance with the EPA's Policy on Consultation and Coordination with Indian Tribes (2011) and Region 10 Tribal Consultation and Coordination Procedures (2012).*

Tools and Techniques



The Organizing Committee will further develop this list of interests and potential members. Once formed, the Roundtable can suggest other interests and/or additional members. The table below is a summary of the various roles and responsibilities involved with the Roundtable.

Name	Proposed Role
Convener: The EPA	The EPA will convene the Roundtable by participating in the Roundtable Organizing Committee and sending invitations to potential members for the first meeting. The EPA will participate in general discussions, but not in the development of final recommendations.
Roundtable Organizing Committee	The EPA, in conjunction with a neutral facilitator, will choose members to serve on this committee. The Roundtable Organizing Committee will meet prior to the formation of the Roundtable to develop draft operating procedures for ultimate acceptance by the Roundtable. It is intended for this Committee to disband once the Roundtable forms.
Roundtable Representatives	Roundtable representatives will speak on behalf of various interest groups to develop recommendations to put forth to the EPA.
The Public (Non-Members)	The public can provide comments at and observe Roundtable meetings. They can also suggest agenda topics via a Roundtable Representative or to the neutral facilitator in advance of meetings.
Neutral Facilitator	The neutral facilitator will facilitate the Roundtable Organizing Committee. It will act as a neutral conduit of information to ensure equitable participation by all members. The facilitator will also enhance the flow of information to and from the EPA and the multiple communities involved. Lastly, the facilitator will develop meeting summaries and offer organizational support.

Overview of Proposed General Operating Protocols

Members of the Roundtable would present and discuss their needs and concerns related to the LDW Superfund site remedy design, and cleanup process, as well as develop recommendations to the EPA that may address those needs and concerns. Thus, the Roundtable will be primarily concerned with the implementation of the ROD. The EPA proposes the following general operating procedures:

- Representatives would voice the perspectives of their interest groups to the best of their ability.
- The Roundtable would aim to make recommendations reflecting a consensus of representatives. If consensus cannot be reached, interest groups can individually or collectively generate one-page “recommendation sheets” for the EPA or other agency to consider. Alternatively, the neutral facilitator can capture various positions and recommendations in meeting summaries.
- All Roundtable meetings would be publicly announced in advance. The meetings would be open to the public and there would be opportunities for public comment during each meeting.

Tools and Techniques



- The EPA would consider the recommendations from the Roundtable and report back on what decisions it has made (either in writing or verbally during meetings, to be captured in meeting summaries).
- An independent, neutral party would facilitate meetings.
- The Roundtable can form work groups to address issues assigned to them.
- The EPA would sit at the Roundtable but would not make final recommendations.
- The Roundtable would make recommendations to the EPA regarding the frequency of meetings depending on the phase of the cleanup.

The Roundtable Organizing Committee will further develop these draft protocols and the Roundtable will review them. If possible, the Roundtable will approve these draft protocols by consensus. If after due diligence the Roundtable cannot reach consensus on the protocols, then the protocols will be initially approved through a 60% majority vote. The Roundtable can reassess its protocols annually or as needed to ensure the process is meeting the needs of the participants.

Timing

The Roundtable will meet during the phases listed below at a frequency to be agreed to, based on the project and the needs of the group:

- Pre-Design: The Roundtable Organizing Committee will meet in advance of the remedial design phase of the Superfund site cleanup to further develop administrative protocols and topics. The Roundtable will be convened just prior to the start of the design phase to allow the EPA to update Roundtable members on baseline sampling efforts and on coordination between the in-waterway cleanup and Ecology's source control work.
- Design: The Roundtable will meet during the design phase.
- Construction: The Roundtable will meet during the construction phases.

Topics

The Roundtable will discuss topics related to the design and construction of the cleanup. For example, the Roundtable may focus on ways of mitigating construction impacts on community members, job opportunities for community members, cleanup designs, and other topics. However, the Roundtable will not deliberate the remedy described in the ROD since this decision has already been made. The Roundtable Organizing Committee will help identify other topics that fall inside and outside the scope of the Roundtable.

Location

The Roundtable will alternate between meeting in downtown Seattle and in the Duwamish Valley as much as possible to make it easier for community groups to attend.

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5. Media

Information Repository

The EPA maintains a local public site file, which is called the “Information Repository.” The repository contains hardcopies of major site documents, fact sheets, and other relevant items. Electronic copies on compact discs (CDs) are also available at the repository. The repository also holds the Administrative Record, which includes all the documents the EPA relied on in selecting the cleanup plan.

Information Repositories

The EPA has established two information repositories for the LDW Superfund site, located at:

EPA Region 10 Superfund Records Center
1200 6th Avenue, Suite 900, ECL-076
Seattle, WA 98101
(206) 553-4494 (please call for an appointment)

Seattle Public Library - South Park Branch
8604 8th Avenue South, at South Cloverdale Street
Seattle, WA 98108
(206) 615-1688

Fact Sheets and Flyers

Superfund fact sheets are a principal method of providing site-related information to the community. They are short (2-4 page) documents, written in non-technical language that can be e-mailed directly to the site’s mailing list, posted on the EPA LDW webpage, mailed directly to residents, or provided at meetings. They often summarize larger, technical documents. They include agency contact information and refer people to the site-related webpage or repository for more technical information. They have pictures and easy-to-understand text, as well as being factual, neutral, and informative. The EPA will create fact sheets as events dictate, or in response to community requests for specific kinds of information. Fact sheets and similar informational documents on the cleanup will be translated into Spanish and Vietnamese; additional translations will be done in Tagalog, Korean, and other languages as needed.

Websites

The EPA maintains a website on the LDW, including updates on the EAAs and other work related to the cleanup. The EPA will work to ensure the website serves as a clear and organized source of information on the cleanup.

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Email

The EPA maintains a Duwamish listserv, which is a free, subscription-based electronic news distribution system used by the EPA to distribute updates, notifications, and progress reports via email. The listserv cannot be used to transmit graphics and photos; all information conveyed via the listserv is text-only. The EPA will make graphics-rich documents available on the EPA's LDW website in .pdf format. The goal of using the listserv is to spread information quickly and effectively to large numbers of interested parties. To be added or deleted from the listserv, contact Julie Congdon (congdon.julie@epa.gov).

Social Media

Today the media landscape is very different than when the first CIP was published in 2002 as new technologies continue to change the ways in which people receive and share information. The rise of digital forms of communication — from websites and social media, like Facebook and Twitter, to blogs and various phone applications (apps) — means many people rely less on traditional media and often turn to these “new” media forms of communication as primary or supplemental information sources. Over the coming year, the EPA will establish a Facebook page related to the LDW Superfund site. With a dedicated Duwamish Facebook page, the public could get information on: health warnings, traffic changes, information about daily activities, monitoring data, job opportunities, educational events, and the cleanup's progress. The EPA will also aim to create a Duwamish Superfund Twitter account; other social media like Instagram will be considered. The EPA acknowledges social media would be very useful and effective in the LDW cleanup and the EPA will aim to have multilingual social media posts in order to expand its reach into diverse communities. The EPA will not use social media in place of more traditional channels, but rather the EPA's use of social media in the LDW will be in addition to traditional communication channels. Use of social media sometimes represents an added opportunity for engagement with a growing audience of people expecting more transparency, faster communication, and more access to information than ever before.

Left to Right: EPA fact sheets on the LDW from 2011, 2013, and 2014



The Lower Duwamish Waterway cleanup took a big step forward recently when the Lower Duwamish Waterway Group, a partnership of City of Seattle, King County, Port of Seattle, and The Boeing Company, selected a draft plan of cleanup alternatives for review by the U.S. Environmental Protection Agency and Washington State Department of Ecology.

Who commented?

Most of the letters came from people in and around the Seattle area. EPA and Ecology worked hard to inform and engage local residents, including non-English speakers. As a result, we heard from many community members.

We heard from 15 environmental and community interest groups including People for Puget Sound, the Duwamish River Cleanup Coalition, the South Park Neighborhood Association, the Cascade Land Conservancy, and the Sierra Club.

We heard from more than 40 businesses, many located along the Duwamish River, including Ash Grove Cement Company, Delta Marine Industries, Alaska Marine Lines, Duwamish Shipyard Inc., and Boom Boys Crane.

The Sequoyia and McMillen/Talbot submitted letters. These government agencies also submitted comments; these include the Seattle-King County Public Health, the Washington State Department of Transportation, and the National Oceanic and Atmospheric Administration.

What did we hear?

We received a lot of comments, but the most common are included below.

Selecting a cleanup method

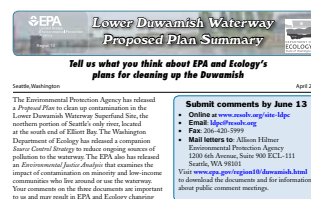
Many people voiced opinions on a preferred cleanup alternative. The alternatives most frequently mentioned were: 1) a combination of dredging, capping and natural recovery; 2) dredging a large portion of the river; and 3) ORCA Option 2, a different option suggested by the Duwamish River Cleanup Coalition that includes a more extensive sediment cleanup than the PS Alternatives and an emphasis on controlling the rippled sources of contamination.

"I believe that alternative 3C provides the best solution for the Duwamish in the immediate future and long term."

"Only one option (Alternative 3C) provides a permanent solution to the amount of dirt we see and does right."

"The river is dead, the more I see in terms of this later option 3C, specifically addressing contamination from upstream and the mouth of the Duwamish River community."

Continued next page



The Environmental Protection Agency has released a Proposed Plan to clean up contamination in the Lower Duwamish Waterway Superfund Site, the southern portion of Seattle's only river, located at the mouth of Elliott Bay. The Washington Department of Ecology has released a proposed *Source Control Strategy* to reduce ongoing sources of pollution to the waterway. The EPA has also released an *Environmental Justice Analysis* that examines the impact of contamination on minority and low-income communities who live around or use the waterway. You can see the full documents and for information to us and may result in EPA and Ecology changing their plans.

A three-part strategy for cleaning up the Duwamish

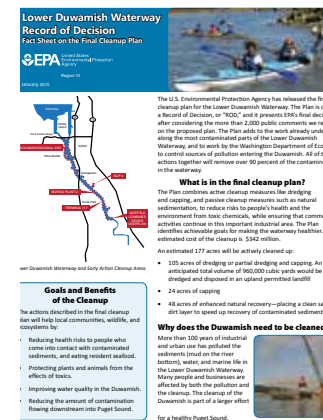
There are three parts in the cleanup proposed by the EPA and the Washington Department of Ecology for cleaning up the Lower Duwamish Waterway:

Part 1 – Clean up the most contaminated areas first. Channels have been contaminated at three Early Action Areas (Duwamish Diagonal, North End Canal, and Duwamish River, and Ship 6), and are under way at two more (Boeing Plant 2) progress. Part 1 includes 117, EPA expects to complete these Early Actions in 2015. They will address 29 acres of polluted sediments, and are projected to reduce PCB concentrations in the waterway within 10 years.

Part 2 – Investigate and control ongoing sources of contamination to the waterway. Ecology is the lead agency for controlling sources of contamination in the Duwamish. Ecology and other agencies have made substantial progress towards cleaning up the contaminated sediment (trash) in the Lower Duwamish Waterway.

Part 3 – Clean up the remaining contamination and monitor to measure the success of the remedy in reducing risks. The Proposed Plan describes EPA's recommendation for cleaning up the contaminated sediment (trash) in the Lower Duwamish Waterway.

**For more information on contaminants, see the box on page 8.*



For a healthy Puget Sound.

Tools and Techniques

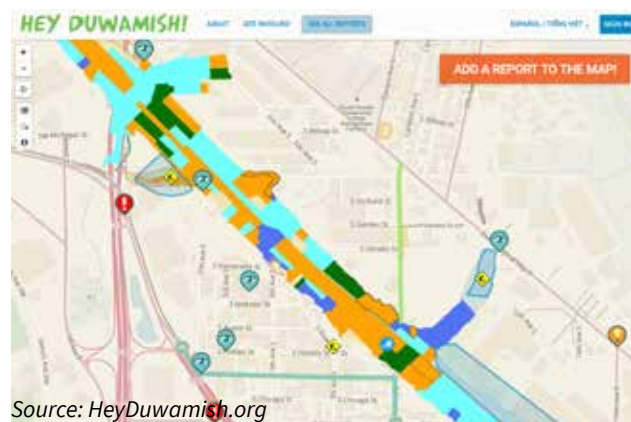
Public Notices, News Releases, and Media Contacts

Public notices will be developed and submitted to local newspapers and radio stations to announce public meetings and other community involvement opportunities. On a regular basis, the EPA provides updates and information to key newspapers, radio, and television stations, and encourages them to further distribute this information. The EPA representatives provide information to news outlets, including ethnic media that reach non-English speaking audiences. News releases and other types of information distribution to the media, help the EPA reach a large audience quickly as well as reinforce and distribute information further. For more information about partnering with ethnic media to reach multilingual communities, please see Appendix F.

Media stories help explain technical information and track sequences of events for the public. Common methods of providing information to the media include the distribution of press releases on developing issues related to the project, individual interviews with project staff, or statements made by EPA representatives during public meetings. It is important to include outlets like the West Seattle Blog in press releases and email announcements.

Maps, Videos and Other Visual Aids

Hey Duwamish! is a mapping program for community members and stakeholders to monitor environmental health issues in Seattle's Duwamish Valley.



To communicate complex issues simply and effectively, maps, photographs, and other visual aids will be used at public meetings, in fact sheets, and on the LDW Superfund site website. These aids may be used to assist in communicating information regarding project work areas, processes, and technologies related to the cleanup. The EPA will develop informational posters on the cleanup that can be posted in community gathering places such as neighborhood centers, community clubs, Tribal centers, etc. The EPA will assess its ability to communicate through crowd-sourced mapping websites like HeyDuwamish.org (see image at left). The EPA acknowledges the efficacy of such sites in conveying a sense of space for the public in terms of what is going on in the Duwamish Valley.

To better tell the story about the LDW cleanup, the EPA could develop a short, engaging video to describe the Superfund process, how the LDW became a Superfund site, how it is being cleaned up, and how people can get involved with the cleanup. The EPA will consider producing video recordings representative of some project activities, such as sediment sampling and testing, dredging operations, and sediment processing and transfer activities. These videos will allow members of the community to view examples of project activities. Videos can also be used as a tool to explain how activities are occurring.

Tools and Techniques

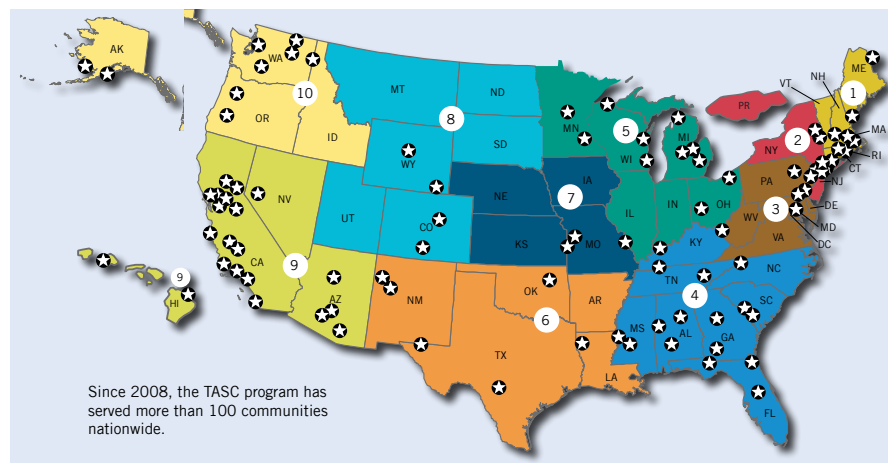
6. Technical Assistance and Economic Development

Technical Assistance

The EPA offers a variety of technical assistance programs to communities affected by Superfund cleanup efforts. Information about the Technical Assistance Services for Communities (TASC) and Technical Assistance Grants (TAG) are below.

Technical Assistance Services for Communities

This program provides independent assistance through a national EPA contract to help communities better understand the science, regulations, and policies of environmental issues and EPA actions. Under the TASC contract, a contractor provides scientists, engineers, and other professionals to review and explain information to communities. The services are determined on a project-specific basis and are provided at no cost to communities. This assistance supports community efforts to get more involved and work productively with the EPA to address environmental issues. TASC services can include information assistance and expertise, community education, information assistance needs evaluation, and plan development, and assistance to help community members work together to participate effectively in environmental decision-making.



Technical Assistance Grant

A Technical Assistance Grant (TAG) helps communities participate in Superfund cleanup decision-making. It provides funding to community groups to contract their own technical advisor to interpret and explain technical reports, site conditions, and the EPA's proposed cleanup proposals and decisions. This federal grant is awarded to an incorporated nonprofit organization of community members affected by the site. It is used to fund an environmental professional to provide an independent technical review of cleanup documents. Up to \$50,000 is available on a biannual basis to help the community understand technical information about their site. As mentioned earlier, the TAG recipient for the LDW Superfund site is the DRCC/TAG.



Tools and Techniques

Economic Development

Economic development and job creation is important to communities affected by the cleanup. There are two EPA-supported grant programs that aim to address job opportunity interests in the community: Superfund Job Training Initiative (SuperJTI), and Environmental Workforce Development and Job Training (EWDJT). More details on these programs are below.



Source: DRCC/TAG

SuperJTI graduation, hosted by DRCC/TAG.

Superfund Job Training Initiative (SuperJTI)

The [Superfund Job Training Initiative \(SuperJTI\)](#) program combines extensive classroom instruction with hands-on training exercises for each participant. SuperJTI graduates have the technical skills to work on a broad range of construction projects, other environmental remediation projects, and cleanup projects at Superfund sites. This national EPA contract provides job training to communities affected by hazardous waste sites regulated by the Superfund and Resource Conservation and Recovery Act (RCRA) programs, as well as federal facility and Tribal removal sites. The EPA's Office of Superfund Remediation and Technology Innovation (OSRTI) manages the contract. The EPA also uses its community involvement program to create partnerships with local businesses, community organizations, and other federal agencies to develop and support job training.

Working with DRCC/TAG, the EPA sponsored training through the SuperJTI in 2013 to train local residents in cleanup jobs related to the Duwamish Early Action Area cleanup projects. The EPA hopes to continue training through the SuperJTI periodically throughout the cleanup process if funds continue to be available for the program. The EPA will encourage PRPs and contractors to hire locally but cannot require parties to do so. While the SuperJTI process facilitates job placement, there are no guarantees. To maximize opportunities to place trainees in jobs soon after completion of training, local partnerships strive to coordinate training with the availability of jobs in the community, like those that could be available at a Superfund site cleanup. The goal of SuperJTI is to help participants get a "foot in the door."

Environmental Workforce Development and Job Training (EWDJT)

[Environmental Workforce Development and Job Training](#) is an EPA program that provides direct funding for support on such projects like environmental job training. This program provides grants that allow eligible entities, including nonprofit organizations, to recruit, train, and find jobs for people living in areas affected by solid and hazardous waste, especially for people who are low-income, unemployed, under-employed, and/or people of color. Residents learn the skills needed to secure full-time, sustainable employment in the environmental field, including assessment and cleanup work taking place in their communities. Each EWDJT grant may be funded up to \$200,000 over a three year period. While this hasn't been used in the past by groups in the LDW, organizations may apply to this program to fund job training.

Tools and Techniques

Reuse and Redevelopment

[Superfund Redevelopment](#) has helped communities reclaim and reuse thousands of acres of formerly contaminated land. Through an array of tools, partnerships, and activities, Superfund Redevelopment continues to provide local communities with new opportunities to grow and prosper. Superfund Redevelopment works with communities to provide site-specific reuse support and help return Superfund sites to productive use. While this program is similar to the EPA's Brownfields program in that both efforts seek productive uses for environmentally impaired properties, they address different kinds of sites and use different methods to accomplish their objectives. Superfund Redevelopment mostly focuses on sites on the National Priorities List and considers reuse in the context of site cleanup.

7. Updates to the Community Involvement Plan

As additions, changes, and improvements to the CIP are identified, the EPA will update the CIP, notify the public of changes via the listserv and other communication tools, and post the revised version of the document on the website. Updates will include tools and plans that are developed for the Remedial Action phase of the cleanup, such as a Community Health and Safety Plan.

Informational Websites

U.S. EPA Region 10

EPA's LDW website: <http://yosemite.epa.gov/r10/cleanup.nsf/sites/lduwamish>

For more information about the cleanup, you may contact the EPA representatives noted below.

Elly Hale, Remedial Project Manager, (206) 553-1215 or (800) 424-4372, hale.elly@epa.gov

Julie Congdon, Community Involvement Coordinator, (206) 553-2752 or (800) 424-4372, congdon.julie@epa.gov

Washington State Department of Ecology:

LDW website: http://www.ecy.wa.gov/programs/tcp/sites_brochure/lower_duwamish/lower_duwamish_hp.html

Lower Duwamish Waterway Group

<http://www.ldwg.org/>

U.S. Department of Health & Human Services - Agency for Toxic Substances and Disease Registry

<http://www.atsdr.cdc.gov/dro/r10.html>

Washington State Department of Health

<http://www.doh.wa.gov/CommunityandEnvironment/Food/Fish>

Public Health Seattle & King County

<http://www.kingcounty.gov/healthservices/health.aspx>

Duwamish River Cleanup Coalition / Technical Advisory Group (DRCC/TAG)

<http://duwamishcleanup.org/>

Appendix A: Overview of the Federal Superfund Program and Process

Preliminary Assessment/Site Inspection (PA/SI)

Contaminated sites are often identified through community or worker complaints, reports of contamination, inspections, or environmental testing. Once a site is identified, the EPA conducts a Preliminary Assessment/Site Inspection (PA/SI). For a PA/SI, the EPA generally reviews existing information, inspects the site, and may interview nearby residents to find out the history of the site and its effects on the population and the environment. The EPA also normally tests the soil, water, and air to determine what hazardous substances were left at the site and how serious the risks may be to human health and the environment. The EPA may take early action at a site if there is a need for quick risk reduction and enough site information and data are available to take action. Early actions often focus on control of contamination sources, like leaky tanks or contamination hotspots in soil, or preventing exposure to the contamination. For example, the EPA may take early action to provide an alternative water supply to residents who are affected by contaminated drinking water, while the PA/SI process continues throughout the site. Additionally, these sites often require long-term actions such as restoring contaminated ground water or taking measures to protect wetlands, animals, and other ecological resources. In contrast to early actions, long-term cleanups are complex and may take many years to complete. Depending on the situation, the EPA may conduct various community involvement activities during the PA/SI phase. These activities may include meeting with local officials and opinion leaders, conducting community interviews, or planning an informal community meeting. The EPA may also prepare fact sheets, contact local media, establish an Information Repository, and designate an EPA Community Involvement Coordinator (CIC). In addition, the community may provide any information it has about the site to the EPA.

The National Priorities List (NPL)

The NPL is a list of the most serious sites identified for long-term cleanup. When the EPA proposes to add a site to the NPL, the proposal is published in the Federal Register, the official publication of the U.S. government, and the public has an opportunity to comment on whether the site should be included on the NPL. The EPA responds to comments and, if applicable, announces the decision in the Federal Register. After a site is added to the NPL, the EPA is required to conduct community interviews and to develop a Community Involvement Plan (CIP). The EPA must also establish and maintain an Information Repository and Administrative Record and inform the public of the availability of these document archives. The LDW was added to the NPL in 2001.

Remedial Investigation/Feasibility Study (RI/FS)

Once a site is placed on the NPL, further investigation into the problems at the site and the best way to address them is required. This is called the Remedial Investigation (RI) and Feasibility Study (FS). The RI usually involves gathering and analyzing numerous samples of soil, surface water, ground water, and waste from locations throughout the site and near the site borders. The RI also involves assessing risks posed by the site and determining the extent of the contaminated area needing cleanup. The analysis of potential cleanup methods, or “alternatives”, is the FS. During the FS, the advantages and disadvantages of each cleanup method are explored. The Final LDW RI Report was completed in 2010; and the Final LDW FS was completed in 2012.

Appendix A: Overview of the Federal Superfund Program and Process *(continued)*

Proposed Plan

After all of the cleanup alternatives are evaluated according to the nine criteria (see page 8), the EPA recommends the option it considers best for the site and offers it to the community in a Proposed Plan for evaluation and comment. A Proposed Plan summarizes cleanup alternatives studied in the FS, and includes information on the site history, community participation, the nature and extent of the contamination, and the reasonably anticipated future land uses at the site. The EPA provides the public with an opportunity to comment on the Proposed Plan in writing or in person and hosts a public meeting to discuss the recommended cleanup method. Community input at this phase is critical to making good choices. The EPA provides a “responsiveness summary” of the written and oral comments the public has made and the EPA’s responses to those comments. The EPA released the Proposed Plan for the LDW in 2013. The plan identified the preferred alternative for site cleanup and described other alternatives considered. Public meetings were held and comments were solicited and recorded.

Record of Decision (ROD)

The cleanup method ultimately chosen for the site, and the reasons for the selection, are set forth in the ROD. The ROD is a document that is available to the public and summarizes all the activities that occurred prior to selection of a cleanup method, and describes how the cleanup method will be protective of human health and the environment. It also contains the responsiveness summary and shows how those comments were factored into the final decision. The EPA issued the ROD for the LDW in 2014.

Changes to the ROD

The ROD sets forth a site cleanup decision that is based on information available during the site study and public comment period. As design and construction of the cleanup progresses, new information may arise that alters the cleanup areas, material volumes, costs, and other aspects of the cleanup. The EPA evaluates the significance of such changes and documents minor changes in the record. Changes that are significant but do not fundamentally alter the cleanup decision must be documented in an Explanation of Significant Differences (ESD). In this case, the lead agency must publish a summary of the ESD and the reasons for the changes and must make the ESD and supporting information available to the public. Fundamental changes to the cleanup decision require an amendment to the ROD. The lead agency must propose the ROD amendment for public comment and issue a notice of the proposed amendment in a major local newspaper of general circulation.

Remedial Design (RD)

The RD is the phase during which the plans for the cleanup method are carefully designed. The RD is based on the cleanup method described in the ROD. As the plans for constructing the cleanup are developed and reviewed, more sampling may be needed to further define the location and amount of contamination. For the LDW cleanup, the EPA will distribute fact sheets when 30% of the Remedial Action (RA) has been designed, when 60% has been designed, and when the design work is complete. The details of the in-waterway work will be decided and contractors selected to perform the cleanup. The EPA will also provide a public briefing about the final design before cleanup work begins as part of the RA.

Appendix A: Overview of the Federal Superfund Program and Process *(continued)*

Remedial Action (RA)

The RA starts the actual cleanup at a site. For example, remedial action at LDW will include dredging, placing clean sand layers, and monitoring as required by the ROD and remedial design. The RA phase is similar to building a house. Those responsible for the cleanup obtain all the materials needed and follow the plans that were developed during the RD phase. During the RA phase, construction equipment will operate on site to conduct the cleanup. During the RA phase, the community should be informed about the work to be done including planned work hours, truck traffic, as well as health and safety precautions.

Five-Year Review

This is an analysis prepared every five years to determine if site cleanup remedies remain protective of human health and the environment. At sites where contaminants remain on site after construction, the first Five-Year Review must be completed no more than five years from the start of the ROD cleanup. Prior to each Five-Year Review, the community is notified and asked to provide information, issues, and concerns that have arisen regarding the cleanup. When the Five-Year Review report is complete, the EPA announces that the report is available at the Information Repository and online for the public to review.

Deleting a Site from the NPL

The EPA may delete a site or portion of a site (sometimes called an operable unit) from the NPL if all cleanup goals have been met and no further cleanup action is required to protect human health and the environment. The EPA publishes a notice of its intention to delete the site or portion of the site from the NPL in the Federal Register, and notifies the community of the opportunity for comment. The EPA then accepts comments from the public and formally responds to public comments received. If, after the formal comment period, the site or portion of the site still qualifies for deletion, the EPA publishes a formal deletion notice in the Federal Register and places a final deletion report in the Administrative Record for the site.

Appendix B: Site History

20th Century History

1900 - 1935

The start of industrial and commercial activity along the Duwamish coincided with the dredging and straightening of the waterway in the early 1900s. Prior land use in the Duwamish Valley was primarily agricultural. Early activities included operation of sawmills, lumber yards, wood treatment facilities, cement and brick companies, steel mills and foundries, and marine construction. Early facilities include the Georgetown Steam Plant (built in 1906), The Boeing Company (Boeing) airplane manufacturing Plant 1 (1917), and King County Airport/Boeing Field (1928).

1935 - 1955

Industrial use of the Duwamish River accelerated with the onset of World War II. Many of the existing industries (for example, airplane and steel manufacturing) grew to support the war effort and new enterprises, such as drum recycling and chemical production, appeared. Boeing Plant 2 was constructed from 1937 to 1940. Waste disposal practices in the 1950s and earlier included local landfills for solid waste, soil infiltration for liquid waste, and direct disposal of liquid and solid waste into the waterway. A primary treatment sanitary sewage facility on Diagonal Way opened in 1938.

1955 - Present

By 1955, sawmills, lumberyards, and brick manufacturing facilities had virtually disappeared. Current industrial uses include shipyard operations, manufacturing (airplane, cement, and chemicals like paint, glue, resin, and wood preservatives), cargo storage and transport; metal manufacturing and recycling, and petroleum storage. A new sanitary sewer system was constructed in the 1970s to serve both sides of the waterway. The landfills near the Duwamish River are now inactive.

Site Cleanup

Site History from 2001 to 2015

The Site was listed on the NPL on September 13, 2001. The EPA and Ecology have divided responsibility for leading the site cleanup. The EPA has the lead for the in-waterway portion that is addressed in the ROD. Ecology has the lead for upland source control.

Year	Description
1999	Initial sediment cleanup at the Norfolk Combined Sewer Overflow/Storm Drain (CSO/SD)
2000	The LDWG, under a Consent Order with EPA and Ecology, starts RI/FS for the LDW
2001	The LDW listed as an EPA Superfund site
2002	The LDW designated a cleanup site under Washington MTCA Memorandum of Understanding establishes EPA as the lead agency for in-waterway cleanup and Ecology as the lead agency for source control. Ecology forms the Source Control Work Group and initiates source control effort, with ongoing studies and actions

Appendix B: Site History *(continued)*

Year	Description
2003	Phase 1 RI completed Additional cleanup conducted at the Norfolk CSO/SD
2004	Ecology issues Source Control Strategy
2005	Sediment cleaned up at the Duwamish/Diagonal CSO/SD
2006	EPA publishes decision for early action at Slip 4
2010	RI for the LDW completed EPA publishes decision for early action at Terminal 117
2011	EPA publishes decision for early action at Boeing Plant 2 EPA publishes decision for early action at Jorgensen Forge
2012	Cleanup completed at Slip 4 Early Action Area LDW FS completed
2013	Cleanup starts at Boeing Plant 2 and Terminal 117 Early Action Areas The LDW Proposed Plan released for public comment Fishers Study added to LDWG Consent Order
2014	Sediment cleanup starts at Jorgensen Forge Early Action Area (now Earle M. Jorgensen EAA) Carbon Amendment Pilot Study added to LDWG Consent Order EPA releases final cleanup plan (Record of Decision) for the LDW
2015	Sediment cleanup completed at Boeing Plant 2 Early Action Area Sediment cleanup completed at T-117 Early Action Area
2016	Predesign studies added to LDWG Consent Order Ecology issues updated Source Control Strategy

Appendix C: Past Community Involvement for the LDW Superfund Site

This section briefly describes earlier community involvement activities that the EPA and Ecology used to help the community actively engage in the cleanup process. The EPA has engaged in extensive community outreach throughout the many stages of the Superfund process for the LDW. Other entities, including Ecology, DRCC/TAG and LDWG, have supported and led some of these efforts. In coming to a decision on the final cleanup plan for the LDW, the EPA did not make it in a vacuum, but benefitted greatly from the input received from the public. In the Duwamish Valley, the EPA's efforts to provide opportunities for public participation have gone well beyond the requirements of the CERCLA and the National Contingency Plan (NCP). Input from the public and other stakeholders throughout the RI/FS was instrumental in developing both the Proposed Plan and the ROD. Prior efforts around community involvement have created a foundation of public participation that these next phases of the LDW cleanup will build upon.

Activities After the Superfund Listing of the LDW

Community Involvement Plan: The EPA developed a Community Involvement Plan (CIP) in 2002 after conducting interviews with community members and other stakeholders. In recognition of the large number of Spanish-speaking residents living near the LDW, the EPA translated the community involvement plan into Spanish, and produced a Latino community involvement supplement to the plan. This supplement focused on the Spanish-speaking community and the special challenges and opportunities involved with engaging this portion of the community.

Information Repositories: The EPA established information repositories where the public can review documents associated with the site. One repository is located at the EPA's office in Seattle and the other is located near the site at the South Park Branch of the Seattle Public Library.

Community Advisory Group: As mentioned in the updated CIP, the Duwamish River Cleanup Coalition (DRCC/TAG) was chosen as the Community Advisory Group (CAG) for the Site in 2002. The Coalition includes two neighborhood associations (South Park and Georgetown), the Duwamish Tribe, ECOSSE and a number of other environmental and social justice groups. DRCC/TAG was formally developed into a non-profit organization in 2007 to receive a Technical Assistance Grant (TAG) from the EPA. DRCC/TAG has used the grant to hire technical advisors to review EPA documents, and to provide briefings and fact sheets to community members.

Written Updates: The EPA has mailed fact sheets and used neighborhood listservs (e-mail mailing lists) to provide updates and notices of meetings. The EPA established a listserv for the LDW and south Elliott Bay Superfund sites, with over 900 subscribers, as a method for sharing information quickly and efficiently. The RI and FS reports, the EPA's Proposed Plan, and reports and updates related to the Early Action Area cleanups are available to the public on EPA's website.

Stakeholders Meetings: Starting in 2007, the EPA established quarterly technical meetings, originally with a group of interests including the Tribes, trustees, and community groups. This group changed in 2010, separating into (1) a broad group of stakeholders (Tribes, trustees, community groups, businesses, including both PRPs and non-PRPs, agencies, and others) who have meetings that are open to the public, and (2) another group limited to just Tribes, trustees, and community groups (known as the TTC). The EPA and Ecology have used these meetings to provide updates on the LDW RI/FS, EAA cleanups, and source control activities and have also sought stakeholder input on the development of the RI, FS, and Proposed Plan at the meetings. EPA and Ecology see value in these exchanges and currently meets with the Duwamish Stakeholders every six months and with the TTC every three months.

Appendix C: Past Community Involvement for the LDW Superfund Site *(continued)*

Activities in the Remedial Investigation/Feasibility Study

The EPA provided information to the public and sought public input throughout the RI/FS and development of the Proposed Plan, including:

- From 2001 when the site was listed on the NPL through 2006, the EPA hosted eight public meetings and open houses.
- The EPA and Ecology staff attended neighborhood association meetings on a regular basis, as well as meetings with the business community, to provide project updates.
- The EPA and Ecology hosted a workshop on contaminated sediment treatment technologies in June 2006.
- The EPA held a public meeting and made the draft RI report available for public comment in 2007. The EPA created summaries of the RI in advance of the public meeting and summarized comments received in a fact sheet.
- In 2010, the EPA held an informal public comment period on the second draft of the FS. The EPA made a summary of the FS available to the public and held two public meetings. The EPA distributed a fact sheet summarizing the comments received after the meetings.
- During the public comment period for the draft FS, a significant number of comments from community members requested an environmental justice analysis of the alternatives described in the FS. The EPA agreed to develop an Environmental Justice Analysis in response to the comments received.
- The EPA hosted a workshop in 2011 bringing together experts and stakeholders to discuss an amendment of sediments with activated carbon to reduce the bioavailability of contaminants.
- In addition to public involvement and Tribal consultation activities centered on the RI/FS, the EPA and Ecology developed fact sheets, held public meetings, and offered many public comment periods on various aspects of source control and cleanup of EAAs.
- The EPA and Ecology used input from a 2010 public review of the draft FS to finalize the FS and develop the Proposed Plan.

A number of innovative approaches have been used to reach community members who might not normally attend an EPA public meeting:

- DRCC/TAG organizes and coordinates, with support and sponsorship from the EPA and others, the annual Duwamish River Festival held in the South Park neighborhood since 2005. The festival attracts hundreds of families each year and has become an important feature of the community. It provides an opportunity for the EPA and other agencies to interact with community members.
- The EPA, public health agencies, and Ecology created a series of posters and handouts that show which fish are safe to eat and provide cooking recommendations. The agencies coordinated on outreach to a health clinic in South Park and participated in a Spanish language call-in program to raise awareness of fish contamination.
- In 2010, DRCC/TAG organized, with support from the EPA, an Environmental Health Fair in South Park. They coordinated a host of environmental and health organizations to educate and empower South Park and Georgetown residents regarding environmental health issues and ways to address those issues. Topics included information about the dangers of eating contaminated resident fish from the LDW and the safest ways to prepare salmon, and raising awareness of household toxic substances and the importance of keeping toxics out of the Duwamish River.

Appendix C: Past Community Involvement for the LDW Superfund Site *(continued)*

Activities after Issuing the Proposed Plan

The public comment period for the Proposed Plan was held from February 28 until June 13, 2013. The EPA extended the comment period from the 30 days required by the NCP to 105 days due to high community interest and a request from the CAG. The Proposed Plan, along with maps and other supporting documents, were posted on the EPA's website. Hard copies and CDs of the Proposed Plan, along with English, Spanish and Vietnamese summaries of the Proposed Plan, were made available at the information repositories.

In addition to a public notice in *The Seattle Times*, published February 28, 2013, the EPA announced the public comment period in a number of locations to reach a wide audience. The EPA sent announcements to neighborhood associations in and near the Duwamish Valley, to industry associations, health providers, environmental groups, and to news outlets that serve diverse and immigrant populations.

The EPA and Ecology hosted five formal public comment meetings during the public comment period, most of which were attended by over 100 people. DRCC/TAG contributed significantly to the success of these meetings. Afternoon and evening meetings were held in the Georgetown neighborhood and in downtown Seattle to accommodate the schedules of the greatest number of people. Spanish and Vietnamese interpreters were provided for both sets of meetings. A court reporter transcribed English oral comments. Spanish and Vietnamese comments were recorded and translated so they could be included in the Administrative Record.

The EPA partnered with DRCC/TAG to hold a public comment meeting entirely in Spanish in the South Park neighborhood, the first of its kind for the EPA at a Superfund site. At that meeting, simultaneous interpretation was available for English speakers. Oral comments were recorded for later translation and inclusion in the Administrative Record.



Appendix C: Past Community Involvement for the LDW Superfund Site *(continued)*

In addition to EPA-sponsored meetings, the EPA discussed the Proposed Plan at several meetings sponsored by DRCC/TAG or other organizations, including:

- South Park and Georgetown neighborhood association meetings;
- A panel discussion at the University of Washington,
- Multilingual “Floating Classroom”;
- Multilingual Public Meeting and Community Workshops;
- A Vietnamese language boat tour;
- A briefing to an Interfaith Coalition; and
- A “Duwamish River in 3-D” event organized by DRCC/TAG to educate community members about the LDW cleanup by building a replica of the LDW in the sand at an indoor volleyball court.

During the public comment period, 2,327 written and oral submissions in 10 languages were received. All comments, including translations of comments submitted in languages other than English, are available as part of the Administrative Record.

The ongoing involvement of the community, tribes, and other stakeholders will remain an important part of the cleanup as it moves forward. The EPA plans to continue to coordinate with Ecology, consult with the Muckleshoot and Suquamish Tribes, and engage with the community throughout design, construction, and long-term monitoring of the cleanup remedy, including any potential modifications to the remedy.

Appendix D: Tribal Consultation

The EPA's policy is to consult on a government-to-government basis with federally recognized Tribal governments when EPA actions and decisions may affect Tribal interests. Consultation is a process of meaningful communication and coordination between the EPA and Tribal officials prior to the EPA taking actions or implementing decisions that may affect Tribes. As a process, consultation includes several methods of interaction that may occur at different levels, depending on past and current practices, adjustments made through [EPA's national policy](#), the continuing dialogue between the EPA and Tribal governments, and program and regional office procedures and plans.

Consultation should occur early enough to allow Tribes the opportunity to provide meaningful input that can be considered before the EPA decides whether, how, or when to act on the matter under consideration. As proposals and options are developed, consultation and coordination should continue to ensure the overall range of options and decisions is shared and deliberated by all concerned parties, including additions or amendments that occur later in the process.

The LDW is one of the locations of the Muckleshoot Tribe's commercial, ceremonial, and subsistence fishery for salmon. It is part of its usual and accustomed fishing area. The Suquamish Tribe actively manages aquatic resources north of the Spokane Street Bridge, just north of the LDW study area. Consideration of how Tribal members may be exposed to contaminants in the LDW while engaging in seafood harvest activities has been a primary factor shaping the assessment of human health risks. The Tribes, as sovereign nations, have engaged in government-to-government consultations with the EPA on the cleanup process and decisions. The EPA has consulted with the Muckleshoot and Suquamish Tribes at key points during the investigation, analysis of alternatives, and cleanup selection phases. The Tribes have also broadly and actively participated in meetings determining the course of the cleanup to date.

The EPA will continue to consult with the Muckleshoot and Suquamish Tribes on a government-to-government basis and will closely coordinate with them throughout design, construction and long-term monitoring of the LDW cleanup. As has been done in the past, all technical documents, such as plans, reports, and related correspondence will be provided to the primary points of contact at the Tribes for review prior to being finalized. The EPA will rely on these Tribal representatives to relay information to their Tribal leadership.

Appendix E: Environmental Justice

Ensuring Environmental Justice (EJ) means not only protecting human health and the environment for everyone, but also making sure all people are treated fairly and are given the opportunity to participate meaningfully in the development, implementation, and enforcement of environmental laws, regulations, and policies. In the EPA's implementation of environmental justice, the concept of fair treatment has been expanded to include not only the consideration of how burdens are distributed across all populations, but also how benefits are distributed. In the LDW, the EPA is considering not only the burden of industrial pollution from historical and current practices, but the potential impacts of the cleanup itself.

In considering the cleanup alternatives, the EPA performed an Environmental Justice Analysis of the LDW. This was the first such analysis written for a Superfund site. Communities within a mile of the LDW are, on average, more diverse in terms of ethnicities, incomes, and languages than Seattle or the rest of King County. The EJ Analysis found per capita incomes are 34-42% lower in the LDW corridor than for other regions in the area. Additionally, 31.9% of residents in the area are foreign born, as compared with 19.0% in King County. The neighborhoods in the Duwamish Valley have been disproportionately burdened by the environmental and health impacts of pollution in the LDW, caused by nearby industrial facilities. Those living in the area around the LDW have an increased exposure to pollutants, particularly diesel particulate matter, which is related to the high traffic proximity and volume going through their communities. They also have an increased cancer risk, as well as increased exposure to respiratory and neurological hazards. In the 2000 census, 1,270 of housing units in the area were built before 1950, thus exposing residents to increased risk of lead paint exposure. Historically and culturally, the LDW has a subsistence fishing/high fish consumption community.

The purposes of the EJ Analysis were: 1) to screen for EJ concerns; and, 2) to identify disproportionate adverse impacts from the cleanup alternatives and the Preferred Alternative in the Proposed Plan. If disproportionate impacts were found, then provide recommendations to mitigate such impacts. Some of the recommendations were incorporated in the ROD and therefore will be addressed in the remedial design and construction phases of the cleanup. In the EJ Analysis, the cleanup alternatives were compared qualitatively for their long-term and short-term cancer risks and non-cancer effects, the time to achieve human health targets, the certainty of the methods used to conduct the cleanup, and the dependence upon institutional controls such as education and health advisories that have implications from an environmental justice standpoint. The recommendations from the EJ Analysis for the Proposed Plan were:

1. Reducing human health risks as quickly as practicable, while also providing for long-term effectiveness and permanence;
2. Continuing to engage the community throughout remedial design and implementation of the cleanup, including convening an advisory group as a means for the affected community and local agencies to work together on mitigating the impacts of the cleanup on the affected community;
3. Continuing consultation with affected Tribes on recommendations for the remedy;
4. Conducting the Fishers Study to learn more about the affected community (those who consume LDW resident fish and shellfish) in order to enhance outreach efforts;
5. Reducing the impacts of the cleanup on residents through green remediation techniques; and
6. Establishing a mechanism to provide offsets, like fish trading or aquaculture, in the event of higher short term concentrations in fish tissue in the LDW.

The ROD states EJ concerns will be addressed before, during, and after implementation of the cleanup. The information and recommendations from the EJ Analysis were incorporated into the Record of Decision, except for #6 in the above list. The EPA recognizes that there would be a number of administrative

Appendix E: Environmental Justice *(continued)*

and other challenges in implementing offsets and, for that reason, did not include them in the ROD. The EPA intends to use a community based participatory process to develop tools and recommendations from the fishing community. If this process results in the recommendation of tools such as “offsets”, and the EPA, the parties implementing the cleanup, the community, Tribes, and other stakeholders can find a workable approach to implementing offsets, then the EPA will consider selecting them in the future.

Considering the wide diversity of those who live around and use the LDW, the EPA’s community involvement approaches are designed to reach out more effectively to specific populations throughout the remedial design and construction phases. These approaches include:

- Using translation or interpretation services, and, when possible, using local community members to provide those services;
- Holding non-English meetings, if necessary;
- Partnering with local community groups or community leaders;
- Employing nontraditional media outlets for outreach;
- Identifying nongovernment locations to hold public meetings, like Concord International School;
- Scheduling community involvement activities at times that are convenient for the community; and
- Continuing to distribute paper copies of outreach materials when members of the community lack access to electronic forms of communication.

Environmental Justice and Fishing in the LDW

Subsistence fishing takes place along the LDW from piers, boats, parks and shorelines. The consumption of resident fish impacted by contamination from the LDW Superfund site is an additional environmental burden for communities with EJ characteristics. The EPA estimates that the cleanup will reduce seafood consumption risks by at least 90%. However, even if natural background levels are fully achieved in LDW sediments, advisories recommending limiting consumption of resident fish and shellfish will likely be warranted in future, as they are in most of Puget Sound.

The local communities have been engaged in the process thus far, and continued communication and coordination will be essential. In this project, the EPA will strive to conduct outreach that is culturally relevant and targeted, and that will create a space for exchange and discussion to achieve the best cleanup outcome possible. The EPA will make an effort to engage the full diversity of individuals who live, work, and recreate in the LDW.

Additional resources available to address EJ issues include:

- Outreach and technical support programs, such as Technical Assistance Services for Communities (TASC).
- The EPA’s Environmental Justice Small Grants Program, which supports and empowers communities working on solutions to local environmental and public health issues. Past grant recipients have done work in the Duwamish, including: the DRCC/TAG received an EJ Small Grant in 2011 to conduct the “Duwamish Valley Cumulative Health Impacts Assessment;” ECOSS, who received an EJ Small Grant in 2013 to implement a community-based, multi-cultural outreach strategy aimed at reducing exposure to indoor air pollution and decreasing asthma rates for children in the Seattle metropolitan area; and Seattle Tilth, who used their 2012 grant to conduct a Youth Soil and Wetland Restoration Project.
- Environmental job training, through programs such as the Superfund Jobs Training Initiative (SuperJTI) and Environmental Workforce Development and Job Training (EWDJT) Program, are available for residents of impacted communities. Job opportunities is an interest of Duwamish communities, and community members would like to see cleanup contractors hire locally, to ensure the immediate benefits of cleanup flow to local residents in the form of good paying green jobs.

Appendix F: Engaging with Diverse Communities

Many of those who are impacted by the EJ issues in the LDW are from ethnically diverse communities. The EPA will use a variety of engagement strategies to connect with those who live in neighborhoods along the LDW, as well as those who fish in the LDW. The EPA's goal in working with these communities is to ensure all communities have equal access in the cleanup process and an equal voice in the cleanup design and implementation.

As noted in the ROD, the EPA will gather detailed information in Remedial Design about waterway use in specific areas, including impacts on Tribal treaty rights. Participation of these communities in the development of outreach programs, institutional controls, and design of the cleanup remedy is highly encouraged.

This CIP is focused on in-waterway cleanup actions and does not address fishing institutional controls (IC). The EPA will review the results from the ongoing study of fishing and fish, as well as shellfish consumption patterns in planning a community-based process for IC development.

Languages

In working with ethnic communities, the EPA will provide translation of documents and interpretation services for meetings and presentations. The EPA will also consider holding meetings in non-English languages, as needed. Translation will be provided primarily in Spanish and Vietnamese, as well as other languages, as needed. Ideally, as part of translation process, a community member should review all translated documents to ensure language nuances are correct. When possible, the EPA will use local community members to provide language services. Regarding multilingual outreach, interviewees suggested including translation in: Spanish, Vietnamese, Russian, Ukrainian, Chinese, Japanese, Cambodian, Tagalog, and other Pacific Islander languages.

Considering different ethnic communities (particularly those with recent immigrants) may not fully trust government, using the Community Educator Model could be an effective method to engage Latino, Vietnamese, Ethiopian, Somali, and other communities. Members of these communities who serve as community educators for the cleanup or as community experts in other support roles should be paid for their time and efforts if possible. One group noted it's important to treat community members as the experts they are on their communities and, accordingly, should be paid to participate. The EPA plans on working with DRCC/TAG and others to help immigrant communities receive the information they need.

Ethnic Media

Ethnic media outlets are essential in reaching community members. However, media outlets can frequently change, especially as new immigrant communities come into the area. To stay updated with current ethnic media outlets, the EPA will consult the [Ethnic Media Program](#) maintained by the City of Seattle's Office of Immigrant and Refugee Affairs, as well as the [Ethnic Media Directory](#) maintained by Seattle Public Utilities.

Appendix F: Engaging with Diverse Communities *(continued)*

Asian Communities

Studies of the Duwamish Valley fishing community have identified several Asian communities that currently consume fish from the LDW. The following organizations are used by members of many Asian-American Pacific Islanders (AAPI) communities, and may be useful for outreach generally:

- Asian Counseling and Referral Service, 3639 Martin Luther King Jr. Way S, Seattle, WA 98144. Phone: 206-695-7600
- International Community Health Services (ICHS), based in the International District and focuses on the Asian-Pacific Islander Community

The EPA will tailor its outreach to specific Asian groups noted below.

Vietnamese Community

Through the interviews for the CIP, the EPA learned that the Vietnamese population in Seattle emigrated in different waves to the U.S.; they are scattered in different neighborhoods and cities in the area, and the generational differences in this population can be considerable—all of which must be taken into account when engaging with this community. The Vietnamese who use the LDW the most, primarily fishers, are interested in the cleanup and have not been oversaturated with outreach. Given the diversity of this community, outreach to this population cannot be targeted in one centralized location. A range of outreach approaches to the Vietnamese population must be utilized in order to ensure information and involvement opportunities reach all. There is a significant Vietnamese population in the White Center and Burien areas, as well as in Beacon Hill and High Point in Seattle.

Informal Briefings and Presentations to Groups, Posting of Information

All outreach will be conducted in the Vietnamese language to the Vietnamese community at these venues:

- Friday evening community dinner and karaoke at the South Park Neighborhood Center, 8201 10th Ave S, Seattle, WA 98108. Phone: (206) 767-3650
- Vietnamese Martyrs Parish, 6841 S 180th Street, Tukwila, WA 98188. Phone: (206) 325-5626
- Holy Martyrs of Vietnam, 1230 E Fir, Seattle, WA 98122. Phone: (206) 325-5626
- Vietnamese Buddhist Association, 1651 S King Street, Seattle, WA 98144. Phone: (206) 323-2269
- Vietnamese Friendship Association, 3829 S Edmunds Street, Seattle, WA 98118. Phone: (206) 760-1573
- Our Lady of Lourdes Catholic Church, 10243 12th Avenue S, Seattle, WA 98168. Phone: (206) 762-3343
- Vietnamese Senior Association of Seattle (meets at Garfield Community Center), 2323 E Cherry Street, Seattle, WA 98122
- Tổ Đình Việt Nam, 2236 SW Orchard Street, Seattle, WA 98106. Phone: (206) 779-6875
- Tết Health Fair, February (annually)
- Co Lam Temple, 3503 S Graham Street, Seattle, WA 98118. Phone: (206) 723-4741
- Vietnamese Tea Group in at the Yesler Community Center, 917 E Yesler Way, Seattle, WA 98122. Phone: (206) 386-1245
- Jim Wiley Community Center & Neighborhood House adjacent to the Greenbridge neighborhood development (home to many Vietnamese in White Center), 9800 8th Avenue SW, Seattle, WA 98106. Phone: (206) 461-4554
- Vietnamese Saturday Church at St. Mark's on Beacon Hill, 6020 Beacon Avenue S, Seattle, WA 98108. Phone: (206) 722-5165
- White Center Jubilee Days, held in mid-July

Appendix F: Engaging with Diverse Communities *(continued)*

Notifications

- Nguoi Viet Tay Bac - Northwest Vietnamese Weekly News & Directory. 6951 Martin Luther King Jr. Way S #205, Seattle, WA 98118. Phone: (206) 722-6984; Website: <http://nvnorthwest.com/>
- Nguoi Viet Ngay Nay ([Vietnamese Today](#))
- Van Lang Vietnamese Cultural School, P.O. Box 28005, Seattle, WA 98118. Email: vanlangseattle@outlook.com
- Seola Gardens Community Center, 11215 5th Avenue SW, Seattle, WA 98146. Phone: (206) 694-1082
- Radio Saigon and Little Saigon Radio - Vietnamese radio. Quốc Nam, Director. Seattle, WA. Phone: (206) 722-0231; Email: quocnam44@yahoo.com

It was noted in the interviews that the younger generation watches TV news in English and, in turn, tells their elders what is happening. Newspapers and word-of-mouth are most effective for older members, while online information and social media are used more by younger members in the community.

Filipino, Samoan and Other Pacific Islander Communities

The Filipino community and other Pacific Islander communities are using the LDW and in order to inform and involve them more fully in the process, outreach to these community will be made through churches and centers in predominantly Filipino communities on Beacon Hill and High Point, including:

- Filipino Community Center, 5740 Martin Luther King Jr. Way, Seattle, WA 98118. Phone: (206) 722-9372
- Samoan Community Church, 6757 38th Avenue S, Seattle, WA 98118. Phone: (206) 725-5045
- High Point Lighthouse Samoan Assembly of God, 6309 34th Avenue SW, Seattle, WA 98126. Phone: (206) 937-2460

Cambodian Community

Through the CIP interviews, the EPA learned that many Cambodian-Americans generally trust the U.S. government. However, like other immigrant groups, they can be intimidated by government agencies due to language barriers and the fear of fines (e.g., when fishing without a license). They typically trust nonprofit organizations, thus it will be important that the EPA establish a good partnership with a trusted organization in the Cambodian community to ensure this population stays informed and involved. Many Cambodian-Americans learn what is happening in their community from friends and family who speak English well. For the younger generation in the Cambodian community, Facebook is a medium that works well. Concerns of the Cambodian community are jobs, good pay, good benefits, and financial stability. A venue for outreach is:

- Khmer Community of Seattle, 10025 16th Avenue SW, Seattle, WA 98146. Phone: (206) 762-3922

Bhutanese Community

This community fishes the LDW and is interested in the health of the LDW. This environmental interest was demonstrated by a group of Bhutanese-Americans that produced a short video about the Cedar River Watershed. Their video was popular and well-received by the community. Tukwila is home to a number of Bhutanese immigrants and refugees. A venue for outreach is:

- Bhutanese-Nepali Christian Community Church, 3430 S 146th Street, #25, Tukwila, WA 98168. Phone: (206) 602-7668

Appendix F: Engaging with Diverse Communities *(continued)*

Mien Community

The first Mien families arrived in Seattle in the late 1970s and the majority immigrated in the early 1980s.²⁸ The rising cost of living in Seattle has resulted in many Mien families moving outside of city limits to more affordable parts of King County and the Puget Sound Region. However, the Seattle Mien community has been reached in the past through outreach events at the Holly Park International Community Health Services and at the Filipino Community Center.

Latino Community

Both as residents and fishers of the Duwamish, the Latino community is significantly impacted by the cleanup. As over 30% of the minority population in the Duwamish area identifies as Latino, outreach to this community is essential. Interviewees noted Latinos share the value and desire to leave a clean planet for their children and environmental messaging around that can resonate with them. There is a risk of oversaturating and overwhelming the Latino community in South Park with the volume of Superfund site cleanup information; it was suggested that the EPA develop a concise, engaging and snappy “Superfund 101” video in Spanish that could be shared on Facebook, the EPA’s LDW webpage and other venues on the internet. The EPA agrees with this recommendation and will aim to develop an educational video and digital stories on what a Superfund site is and about the cleanup.

Meeting Places for the Latino Community

The EPA heard from many individuals that public meetings in familiar public spaces like schools and restaurants are preferred over meeting in offices. Face-to-face communication with the community is important. Recommendations from interviewees include:

- Attend meetings that are already planned, like neighborhood council meetings. Get on the agenda as a guest speaker.
- Hold a meeting that is co-sponsored by an existing organization or a community leader. Schools, religious groups, health clinics, or non-governmental organizations like DRCC/TAG or ECOSS could be co-sponsors or partners.
- Co-sponsor educational activities with groups like DRCC/TAG, ECOSS, South Park Neighborhood Association, and others.

Potential Partners

SeaMar Community Health Centers, 8915 14th Avenue South, Seattle, WA 98108. Phone: (206) 762-3263.

- This medical organization has several facilities within the LDW project area. They operate on a sliding scale and have bilingual personnel. Services include a daycare center for children, primary medical treatment, family counseling, and a senior center.

El Centro de la Raza, 2524 16th Avenue S, Seattle, WA 98144. Phone: (206) 329-9442

- This is a civil rights organization that operates a grass-roots multiple-service agency. El Centro de la Raza serves a special role in Seattle as a moral and cultural center for Seattle's large Latino community, which is widely dispersed throughout Seattle, rather than being concentrated in a barrio (as is found in many other cities). Their service and advocacy work include children and youth programs, human and emergency services, education and skill building programs, and community building and development.

Appendix F: Engaging with Diverse Communities *(continued)*

Concord International School, 723 S Concord Street, Seattle, WA 98108. Phone: (206) 252-8100

- One group noted involvement with the after-school programs at Concord International School are effective in reaching the Latino community; another person noted the school has a “Green Club” that might be good to work with on projects.

Casa Latina, 317 17th Avenue S, Seattle, WA 98144. Phone: (206) 956-0779

- Casa Latina's mission is to empower Latino immigrants through educational and economic opportunities. Just Health Action has convened meetings here in the past to seek input with its Latino Fisher Advisory Group.

Informal Briefings and Presentations to Groups, Posting of Information

All outreach will be conducted in Spanish. Venues for meetings, posting of information, etc. will include:

- South Park Community Center, 8319 8th Avenue S, Seattle, WA 98108. Phone: (206) 684-7451
- South Park Neighborhood Center, 8201 10th Avenue S, Seattle, WA 98108. Phone: (206) 767-3650
- Holy Family Catholic Church, 9622 20th Avenue SW, Seattle, WA 98106. Phone: (206) 767-6220

Communication

Based on feedback in the interviews, the Latino community is media savvy, and Spanish language TV and radio are popular media outlets. It was also noted that Facebook is popular with many in the Latino community and would be a good way to share information.

Notifications

- La Raza del Noroeste. Phone: (425) 339-3067; Website: <http://www.larazanw.com/>
- KXPA AM 1540. Phone: (206) 292-7800; Website: <http://kxpa.com/> - While this multicultural radio station provides a media voice for diverse communities in the Puget Sound area, its main emphasis is on the Latino community. It has over 88 hours a week of Spanish language programming during primetime hours. Other languages include Russian, Cantonese, Mandarin, Vietnamese, Hawaiian, English, and Ethiopian. Programs are a mix of talk, music, variety, call-in, and community/public affairs.
- El Mundo. Newspaper published every Thursday. 11410 NE 124th Street - PMB 441, Kirkland, WA 98034. Phone: (800) 797-4544; Email: martha@elmundous.com
- El Siete Días. Distributed every Wednesday. 12005 NE 12th St., Suite 26, Bellevue, WA 98005. Phone: (425) 646-8846; Email: raulperez@elsietedias.com

Events

Fiestas Patrias

- This event celebrating the independence days of Mexico and other Latin American countries happens around the third Saturday in September. A parade and community festival happens in South Park at the South Park Community Center.

Latino Health Forum

- The Forum is an annual event that serves as a valuable platform for individuals working in health care, social justice, public policy and for those working with underserved Latino populations.

Appendix F: Engaging with Diverse Communities *(continued)*

African Immigrant Community

According to the 2014 American Community Survey, 3% of the Duwamish Valley consist of African immigrants. The vast majority of these African immigrants come from East Africa, including Somalia, Ethiopia, Eritrea, Sudan, and Kenya. As part of the public outreach surrounding the ROD, DRCC/TAG and the EPA organized a public meeting that included a Somali discussion table to accommodate a portion of this East African population in the Duwamish Valley. In conducting future outreach, the EPA will be sensitive to the differences among the East African communities and will aim to organize culturally aware meetings and activities.

Outreach

The EPA can reach out to members of the East African population through the following agencies and organizations:

East African Community Services, 7054 32nd Avenue S, Seattle, WA 98118. Phone: (206) 721-1119

- The mission of East African Community Services (EACS) is to provide culturally responsive K-12 education programs that aim to keep youth safe and help them succeed in school and life.

Refugee Women's Alliance, 4008 Martin Luther King Jr. Way, Seattle, WA 98108. Phone: (206) 721-0243

- ReWA is a multi-ethnic organization supporting refugee and immigrant women and their families. Includes volunteer opportunities, campaigns, events, and a list of services.

Seattle Office of Immigrant and Refugee Affairs, 600 Fourth Avenue, Floor 6, Seattle, WA 98124-4745. Phone: (206) 727-8515

- The Office's goal is to set measurable outcomes to ensure a consistent implementation of principles of social justice issues which include employment, economic development, public health, student achievement, citizenship, public safety, criminal justice, civic engagement, and protection of civil rights.

Somali Youth and Family Club, 19550 International Blvd, Suite 106, SeaTac, WA 98188. Phone: (206) 779-0138

- This organization works to provide essential services to Somalis and other under-served families and youth in King County. They provide opportunities related to social services, education, as well as cultural and civic engagement.

Appendix G: CIP Interview and Survey Questions

In the summer and fall of 2015, the EPA conducted interviews with representatives from state environmental and health agencies, departments in the City of Seattle, King County, the Port of Seattle, community organizations like the Duwamish River Cleanup Coalition/Technical Advisory Group (DRCC/TAG), ECOSS, the Muckleshoot Tribe, the Suquamish Tribe, the Duwamish Tribe, and others. The EPA also sought input at community council meetings and held input sessions at cafés, libraries, and other gathering places in the community. For some community sessions, the EPA provided interpreters for Spanish and Vietnamese. The EPA also prepared a questionnaire, both in English and Spanish, via Survey Monkey for those who could not participate in an in-person or phone interview, or attend an input session. In total, the EPA held formal interviews with approximately 65 individuals. Informal contact was made with an additional 83 individuals through drop-in sessions, presentations at neighborhood association meetings, and public meetings. Thirty-nine individuals responded to an online survey in English and Spanish. The questions asked in the interviews and the survey are provided below.

Community Interviews

The EPA finalized a cleanup plan for sediments in the Lower Duwamish last November (2014). As we enter the design and cleanup phase, the EPA is updating our Community Involvement Plan. We are conducting interviews of local officials, community residents, community groups, and others to hear their concerns and information needs and to learn how and when they would like to be involved in the Superfund cleanup process for the Lower Duwamish. We want to learn:

- What are effective tools for engaging the communities about the Lower Duwamish cleanup?
- How does the community get information generally, and how do people in the community prefer to receive site-related information from the EPA?
- What are people's primary concerns regarding: health impacts, environmental impacts, and/or cleanup work and its impacts on the community
- As directed in the EPA's Record of Decision (ROD), how would a Community Advisory Group be helpful in enabling the affected community and agencies to work together on mitigating the impacts of the cleanup on the community?
- Given the many agencies and groups that are active in the Duwamish Valley, how can we engage people while avoiding overwhelming them?

To ensure we'll provide the right information in the right way as the EPA's cleanup work progresses, we have some interview questions about how best to communicate with you and other members of the community. This is important since we will need to communicate with people about issues that may come up with the cleanup like safety risks, healthy advisories, traffic impacts, as well as progress, and other issues.

As part of this process to revise the Community Involvement Plan, the EPA has hired Triangle Associates to assist in interviews and to help update the Plan. The information gained from these interviews will inform how the EPA revises the Community Involvement Plan in the EPA's approach and rationale for community involvement efforts and activities throughout the Superfund process. It is the EPA that will conduct the interviews, and not the Community Advisory Group (CAG), as it is the EPA's legal responsibility to "Determine, based on community interviews, appropriate activities to ensure such public involvement."

The information you provide will be integrated with that from other interviews and summarized results will be made public upon request; identifying information will be avoided and interview quotes will not be attributed to any individual. All interviews will remain anonymous and confidential. In accordance with the Privacy Act, the EPA will not release the list of interviewees or the interview schedule. We appreciate your help in improving the Lower Duwamish cleanup process.

Appendix G: CIP Interview and Survey Questions *(continued)*

Questions

Duwamish understanding and connection.

- Tell us how you use/see the Lower Duwamish.
- What are your favorite things about the river?
- What are your least favorite things about the river?

Duwamish contamination issues and concerns:

- Did you know that the Lower Duwamish sediments are contaminated? How did you learn about this?
- What do you know about ongoing sources of pollution to the Lower Duwamish?
- Have you heard about the cleanup plan for the Lower Duwamish (early action cleanups, controlling sources of pollution, dredging and capping the river bed)?
- Do you have any health concerns regarding the Lower Duwamish?
- Do you have any environmental concerns regarding the Lower Duwamish?

How people currently gather, seek or receive general news and information about general community issues and events.

- Where do you physically go for or come across information (community groups, stores, libraries, bulletin board, activities, religious group/church, or social groups)?
- Where and/or from whom do you get information (newspapers, newsletters, personal interactions, websites, blogs, listservs, Facebook, etc.)?
- What language do you generally prefer to receive information?

How people gather, seek or receive news and information about the Lower Duwamish cleanup and cleanup-related issues.

- Whom would you call if you had questions, concerns or information to report about local pollution or contamination?
- Where do you currently get information about Lower Duwamish sediment contamination and cleanup? How accurate do you feel these information sources are?
- What is your understanding of the community's current role in the cleanup of the Lower Duwamish?
- Do you ever get any information directly from the EPA? By going to the EPA website? Receiving an EPA mailing? Attending an EPA meeting?
- What has worked well in keeping you informed and engaged about the cleanup?
- What do you feel has not worked well in keeping you informed about the cleanup?
- Do you feel like there is too much information and outreach efforts regarding the Lower Duwamish? Or, not enough information/engagement?
- If the current information and efforts are too much or overwhelming, how do you suggest we avoid this?

Community Advisory Group (CAG)

A Community Advisory Group (CAG) is made up of members of the community and serves as the focal point for the exchange of information among the local community and the EPA and other pertinent Federal and state agencies involved in Superfund and other cleanup sites. The EPA completed what is known as a Record of Decision (ROD) that lays out the plans for cleaning up the Lower Duwamish sediment contamination.

Appendix G: CIP Interview and Survey Questions *(continued)*

The ROD specifies that community involvement throughout the design and implementation phases of the cleanup will include “convening an advisory group as a means for the affected community and local agencies to work together on mitigating the impacts of the cleanup on the affected community.” The next questions relate to your thoughts about a CAG.

- What would you like the purpose of a CAG to be?
- For the Duwamish cleanup who do you believe would be a valuable participant in or member of a community advisory group for the cleanup design and construction phase?
- From your perspective, what issues, information, and community concerns should a CAG focus on to minimize the impacts of cleanup on you and your community and increase community understanding of the Duwamish sediment cleanup?
- Are you aware of the Duwamish River Cleanup Coalition (DRCC)? (It is the current EPA-recognized Community Advisory Group.)
- Are you aware of other groups that actively monitor Duwamish cleanup issues?
- Are you actively involved with any community groups related to the Lower Duwamish cleanup? If so, what is your role?
- Would you want to be involved in a CAG? If so, how?

How people would like to be involved in future cleanup activities, especially construction and cleanup impacts.

- Do you have any specific questions or concerns about the cleanup?
- What kind of information about the cleanup do you want or need?
- What kinds of things do you think you’ll need to know as design of the cleanup moves forward?
- What would be the best way to provide you information about the cleanup? (List options: Mailings (either/both snail mail or email listserv), Internet, news, meetings, social media, public notices, specific organizations)
- How often would you like to hear about the cleanup? (List options: Weekly? Monthly? Quarterly? Only when something significant happens?)
- What language would you like this information to be in?

Building connections and reaching the underrepresented.

- Are there people or organizations in the community who you think are not having their concerns addressed? Whom should we speak to about this?
- Is there anyone in particular with whom we should contact for these interviews?

Open question.

- How can the EPA maintain an open, transparent relationship with the community?
- Is there any additional information you would like to tell us, or is there anything we did not ask that you feel is important for us to know about?

As noted before, these interviews will remain anonymous and confidential, and your information and insights will be used towards updating the Community Involvement Plan for the cleanup. We aim to have the Plan finalized and out to communities by early November 2015.

We thank you for your time in helping us in this effort. It is our hope that through these interviews we will be able to keep the communities informed about the Duwamish cleanup, using an approach that works well for the community, its residents and its businesses. Thank you.

Appendix G: CIP Interview and Survey Questions *(continued)*

Organization/Agency Interviews

We are conducting interviews of representatives and staff with organizations and agencies involved in the Lower Duwamish Superfund cleanup, including local officials, community residents, community groups, potentially responsible parties (PRPs), and other interested or affected parties to hear their concerns and information needs, and to learn how and when they would like to be involved in the Superfund process. We want to learn:

- What are effective tools for engaging communities re: the Lower Duwamish cleanup?
- How do communities get information and prefer to receive site-related information from the EPA?
- What are the primary concerns about the Lower Duwamish River?
- How would a Community Advisory Group help the affected community and agencies work together to address the impacts of the cleanup on the community?
- Given the many agencies and groups that are active in the Duwamish Valley, how can we engage people without overwhelming them?

We want to ensure we'll provide the right information in the right way as the EPA's work begins and progresses, so we have some questions about how best to communicate with you and other organizations/agencies/PRPs. This is important since we will need to communicate with people about issues that may come up with the cleanup like safety risks, healthy advisories, traffic impacts, as well as progress, and other issues.

As part of this process to revise the Community Involvement Plan, the EPA has hired Triangle Associates to assist in interviews and to help update the Plan. The information gained from these interviews will inform how the EPA revises the Community Involvement Plan and the EPA's approach and rationale for community involvement efforts and activities throughout the Lower Duwamish Superfund process. It is the EPA that will conduct the interviews, and not the Community Advisory Group (CAG), as it is the EPA's legal responsibility to "Determine, based on community interviews, appropriate activities to ensure such public involvement."

The information you provide will be integrated with that from other interviews and summarized results will be made public upon request; identifying information will be avoided and interview quotes will not be attributed to any individual. All interviews will remain anonymous and confidential. In accordance with the Privacy Act, the EPA will not release the list of interviewees or the interview schedule.

We appreciate your help in improving the Lower Duwamish cleanup process and taking the time to answer our questions.

Questions

Obtain background information.

- What does your organization do in the Lower Duwamish Valley?
- How long has your organization been working in the Lower Duwamish Valley?
- For you personally, what role/function do you perform for your organization related to the Lower Duwamish?
- What are your organization/agency/business' major health concerns regarding the Lower Duwamish?
- What are your organization/agency/business' major environmental concerns regarding the Lower Duwamish?

Appendix G: CIP Interview and Survey Questions *(continued)*

Investigate key issues and key stakeholders.

- What Lower Duwamish stakeholders do you work with?
- How do you involve them in your work?
- What lessons have you learned from Lower Duwamish public involvement efforts that have been conducted for the Superfund efforts or Early Action

Area efforts, or other efforts?

- What key issues aren't getting enough attention? What issues are getting too much attention?
- What kinds of things do you think you'll need to know as remedial design moves forward?

Gain insights about perceptions and experiences with the EPA.

- What is your perception and experience about the EPA's community involvement in the Lower Duwamish Valley?
- What does the community you work with think of the EPA? How trusted are they in the community?
- What are the best (and worst) ways to communicate with Lower Duwamish River stakeholders? In particular, what languages and methods (digital versus print) help reach residents of varying ages, abilities, immigration status, ethnicities, and language abilities?
- What ideas do you have for how the EPA, or others, could and should coordinate information for Duwamish stakeholders?
- What do you feel has and/or hasn't worked well in keeping you informed and engaged about the cleanup?
- How can the EPA avoid overwhelming the community in the Lower Duwamish Valley with too many efforts and outreach? How can the EPA avoid duplicating your efforts?

Potentially Responsible Party (PRP) Specific Questions.

- Are you named or being considered to be a PRP for the Superfund cleanup? (If not, skip to next series of questions.)
- How do you presently inform yourself about activities going on around the cleanup of the Lower Duwamish?
- What additional efforts would help you in staying informed on cleanup activities?

Community Advisory Group (CAG)

A Community Advisory Group (CAG) is made up of members of the community and serves as the focal point for the exchange of information among the local community and the EPA and other pertinent Federal and state agencies involved in Superfund and other cleanup sites. The EPA completed what is known as a Record of Decision (ROD) that lays out the plans for cleaning up the Lower Duwamish sediment contamination. The ROD specifies that community involvement throughout the design and implementation phases of the cleanup will include "convening an advisory group as a means for the affected community and local agencies to work together on mitigating the impacts of the cleanup on the affected community." The next questions relate to your thoughts about a CAG.

- From your standpoint, what would you like the purpose of a CAG to be?
- For the Lower Duwamish Valley, who do you believe would be a valuable participant in or member of the CAG specified in the ROD?
- From your perspective, what issues, information, and concerns should a CAG consider in its efforts that would help increase your understanding and knowledge of sediment cleanup efforts of the Duwamish?

Appendix G: CIP Interview and Survey Questions *(continued)*

- Are you aware of the Duwamish River Cleanup Coalition (DRCC)? (It is the current EPA-recognized Community Advisory Group.)
- Does your agency/org/business work with any community groups related to the Lower Duwamish cleanup? If so, what is your role?
- Would you want to be involved in a CAG? If so, how?

Building connections and reaching the underrepresented

- Which stakeholders are not having their concerns addressed? Whom should we speak to about this?

Open question

- How can the EPA maintain an open, transparent relationship with the community?
- Is there any additional information you would like to tell us, or is there anything we did not ask that you feel is important for us to know about?

As noted before, these interviews will remain anonymous and confidential, and your information and insights will be used towards updating the Community Involvement Plan for the cleanup. We aim to have the Plan finalized and out to the public by early November 2015.

We want to thank you for your time in helping us in this effort. It is our hope that through these interviews we will be able to better develop means and methods to keep the communities informed about the LDW Cleanup and create a communication approach that works for the community and its residents and businesses. Thank you.

Questions via SurveyMonkey

The final plan for the Superfund cleanup process for the Lower Duwamish River is out, and while some of the pollution has been removed through the early work done in some areas, there is a lot of work ahead. You have a voice and we want your input on how to keep communities involved as the cleanup moves forward. The EPA is updating the Community Involvement Plan for the Duwamish cleanup, and we are conducting interviews of local officials, residents, community groups, and others to hear their concerns and information needs and to learn how and when they would like to be involved in the Superfund cleanup process.

The information you provide will help us engage communities effectively during cleanup design and construction. Information from interviews will be summarized and made public upon request. But our notes are confidential, and we are not collecting personal information such as your name, address or other personal information (not even the IP address of your computer will be collected). We appreciate your help in improving the Lower Duwamish River cleanup process.

Questions

- What do you know about pollution in the Lower Duwamish River?
- Have you heard about the cleanup plan for the Lower Duwamish River? If so, what do you know about it?
- What are your primary concerns about the cleanup work and its impacts on your community?

Appendix G: CIP Interview and Survey Questions *(continued)*

- What has worked well in keeping you informed and engaged about the cleanup?
- What do you feel has not worked well in keeping you informed about the cleanup?
- Please answer these questions about receiving information about your community (pick all that apply on the table on the next page)

Where Do You Currently Get Information?

- ☐ Family, friends, neighbors
- ☐ Listservs
- ☐ Mailings, like, postcards, letters
- ☐ Meetings in the community
- ☐ Newsletters
- ☐ Newspapers
- ☐ Radio
- ☐ TV
- ☐ Websites
- ☐ Blogs
- ☐ Emails
- ☐ Twitter
- ☐ Instagram
- ☐ Facebook
- ☐ Other

Where Would You Like to Get Information?

- ☐ Family, friends, neighbors
- ☐ Listservs
- ☐ Mailings, like, postcards, letters
- ☐ Meetings in the community
- ☐ Newsletters
- ☐ Newspapers
- ☐ Radio
- ☐ TV
- ☐ Websites
- ☐ Blogs
- ☐ Emails
- ☐ Twitter
- ☐ Instagram
- ☐ Facebook
- ☐ Other

7. Do you ever get any information directly from the EPA? If so, how?

- ☐ Looking at EPA's website
- ☐ Getting an email from EPA
- ☐ Getting a postcard or letter from EPA
- ☐ Attending an EPA meeting

8. Community Advisory Groups (CAG) make sure the community has a voice as the cleanup is planned and construction is occurring. A CAG is made up of representatives of diverse community interests. Its purpose is to provide a public forum for community members to present and discuss their needs and concerns related to the Superfund decision-making process, and to serve as the focal point for the exchange of information among the local community and the EPA, the State regulatory agency, and other pertinent Federal agencies involved in cleanup of the Superfund site.

- What issues, information, and community concerns should a CAG focus on to minimize cleanup impacts and increase community understanding of the

Appendix G: CIP Interview and Survey Questions *(continued)*

cleanup?

- Are you involved with or aware of any community groups related to the Lower Duwamish River cleanup? If so, how are you involved?
- What people or organizations should be part of a CAG?
- Are you aware of the Duwamish River Cleanup Coalition (DRCC)? (DRCC /TAG is the current EPA-recognized Community Advisory Group)

9. What kind of information about the cleanup do you want or need?

- ☐ Health warnings
- ☐ Traffic changes
- ☐ Information about daily activities
- ☐ Monitoring data for air, noise, navigation, etc.
- ☐ Job opportunities
- ☐ Educational events
- ☐ Clean-up progress
- ☐ Other _____

10. How often would you like to hear about the cleanup?

- ☐ Weekly
- ☐ Monthly
- ☐ 4 times a year
- ☐ Only when something significant happens

11. Is there any additional information you would like to tell us, or is there anything we did not ask that you feel is important for us to know about?

Your information and insights will help us update the Community Involvement Plan for the cleanup. We aim to have the Plan finalized and out to communities by early November 2015.

We thank you for your time in helping us in this effort. This information will help us keep people like you informed about the Duwamish cleanup in a way that works for them.

Thank you.

Appendix H: What the EPA Heard in Interviews

To guide the update of the 2002 CIP, the EPA conducted interviews in 2015 with representatives from state environmental and health agencies, departments in the City of Seattle, King County, and the Port of Seattle, community organizations like the Duwamish River Cleanup Coalition/Technical Advisory Group (DRCC/TAG), ECOSS, the Muckleshoot Tribe, the Suquamish Tribe, the Duwamish Tribe, and others. The EPA also sought input at community council meetings and held input sessions at cafés, libraries, and other gathering places in the community. For some community sessions, the EPA provided interpreters for Spanish and Vietnamese. The EPA also prepared a questionnaire, both in English and Spanish, via Survey Monkey for those who could not participate in an in-person or phone interview or attend an input sessions. In total, the EPA held formal interviews with approximately 65 individuals. Informal contact was made with an additional 83 individuals through drop-in sessions, presentations at neighborhood association meetings, and public meetings. 39 individuals responded to an online survey in English and Spanish. Below is a summary of what the EPA heard in these interviews and outreach efforts.

What the EPA Heard Regarding the Natural Environment

- Address air pollution.
- Mitigate the impacts of climate change and sea level rise impacts on the cleanup and the river.
- Increase the amount of green space in the area (namely Georgetown) and improve the quality of green space, including preventing recontamination of greenbelts, and concerns about future uses of greenbelts/greenspace.²⁹
- Address transportation concerns, including traffic (both road and waterway), parking, safe walking routes (e.g., not many, if any, sidewalks in Georgetown).
- Focus on environmental justice concerns given the Tribes, residents and recreational/subsistence fishers who rely on, live near, or work alongside the LDW.

What the EPA Heard Regarding Human Health

- Protect the health and well-being of the people who live and work around the LDW.
- Ensure the cleanup work will address the pollution issues that are causing health problems/impacts.
- Establish a mitigation or health revitalization fund to protect and revitalize the Duwamish Valley by addressing historical and ongoing cumulative health impacts, using funding from potentially responsible parties.
- Provide information on health warnings.
- Engage communities in providing information on potential warnings or behaviors such as fishing that may impact their health.

What the EPA Heard Regarding Recreational Use of the Lower Duwamish River

- Work to ensure the cleanup is compatible and promotes recreational use of the LDW, including kayaking and boating, and provisions for small boat access points.
- Improve access to the LDW.
- Improve the safety of public beaches for recreational use.

Appendix H: What the EPA Heard in Interviews *(continued)*

What the EPA Heard Regarding Fishing and Institutional Controls

- Improve fishing piers, including better access, longer hours, safety lighting, transportation/bus access, parking, and washing stations
- Reduce the reliance on fish advisories and achieve protection of human health through reduction of fish and shellfish tissue contaminant concentrations.
- Ensure that ICs are linguistically appropriate.
- Better coordination between the public health and fishery management messaging.
- Use community based participatory methods that empower the local community in addition to traditional education/information-based campaigns.
- Ensure that the fishing community and ICs are evaluated over time to ensure they are effective and appropriate for the given community in the context of the ongoing cleanup work.

What the EPA Heard Regarding Cleanup Activities

- Mitigate the impacts of dredging right behind residents' homes.
- Minimize the noise from remote-controlled trains and construction noise near residential areas.
- Minimize light pollution.
- Increase the use of “green,” sustainable remediation practices, particularly in regard to cleaner fuels and “green remediation” policies and initiatives that will further reduce air impacts.
- Mitigate cleanup-related truck and rail traffic on potentially affected residents.
- Involve the public in the cleanup effort and provide volunteer opportunities to help, e.g., planting native vegetation.
- Address how the cleanup will impact the houseless population encamped along the river.

Requests Regarding Land Use, Development, and Civic Improvements

- Develop improvements that will yield tangible benefits for these communities, such as community health clinics, food banks, boat access to the river, bike paths, parks, activity centers, and education and training for youth.
- Address the unintended impacts of eco-gentrification as a result of a cleaner river and work to minimize displacement of existing residents.

Requests Regarding Businesses in the Duwamish Valley

- Conduct outreach to businesses and their employees who work along the river.
- Account for the current uses of each waterfront parcel and protect water-dependent uses.
- Protect ongoing use of the LDW by businesses.
- Ensure the cleanup accommodates current and future operational needs of waterfront businesses both during and after the cleanup.
- Provide flexible cleanup processes for individual river segments.
- Provide incentives for businesses to complete cleanup actions.

Appendix H: What the EPA Heard in Interviews *(continued)*

Requests Regarding Cleanup-Related Employment

- Generate living wage and “green” jobs in the local community throughout the cleanup to ensure local residents are provided the tools and opportunity to benefit from jobs associated with the cleanup.
- Provide cleanup job training and placement assistance to local community members.
- Host a job fair for employment related to the LDW cleanup. This would be a good venue for graduates of job training programs in such skill areas as habitat restoration work, stormwater operation and maintenance, cleanup/remediation work, etc.

Requests Regarding Coordination Among Government Agencies

- The EPA and Ecology should work together and be explicit about their respective roles.
- Improve coordination among the various entities involved in the cleanup.
- City agencies and departments working in the Duwamish Valley need to be aware of each other’s work. The public has asked and will continue to ask questions that are not specifically directed to a certain agency or department.
- The EPA should work with the local health department (Public Health Seattle and King County), WA State Department of Health, and federal Agency for Toxic Substances and Disease Registry to design better health messages. Work to find better strategies to reach people so that the message is heard.
- Better coordination amongst the fisheries management agencies (Washington Department of Fish and Wildlife) and the public health agencies to align the messaging around fishing and fish consumption on the LDW.

Requests Regarding Public Outreach and Involvement

- Create a notice board or an information kiosk/notice board with an artistic element such as a mural as its backdrop. People could go to these information boards to find out what’s going on in the LDW via clearly written information and graphics. Bi-monthly updates are recommended. An information kiosk was used for the Terminal 117 cleanup, which the community found helpful and valuable.
- Give people a vision of what the future river will look like.
- Provide translation of documents and interpretation services for meetings and presentations.
- Use local translators and interpreters (or community members) for language services.
- Organize art projects related to the cleanup to give people a positive vision of the future, rather than only focusing on the pollution.
- Create a program where a percentage of the costs of the Superfund cleanup gets directed towards local public schools (“1% for the Schools”).
- Conduct on-the-spot surveys in person in Georgetown and South Park.
- Host an outdoor movie screening along the LDW as a way to engage with the community; the event could be in conjunction with other community organizations or efforts like the South Park Green Vision Project.
- Attend community meetings to make announcements related to the LDW.
- Increase outreach to neighborhoods between Marginal Way to Delridge.
- Host informational events at local restaurants and cafes.
- EPA should have a physical office in the Duwamish Valley in order for people living in the Valley to have a local contact. The office can serve as a “one-stop shop” where people can learn about all aspects of the cleanup, from source control work to the Superfund cleanup.
- If EPA cannot have a physical office, then it should have regular “office hours” in local cafes, libraries and gathering places. These office hours should be after 5 p.m. so community members can more easily attend after work.

Appendix H: What the EPA Heard in Interviews *(continued)*

- Hang up flyers in neighborhood centers, community clubs, Tribal centers, etc.
- For important announcements, EPA could send out postcards to residents in the Duwamish Valley.
- Tap into community hubs and leaders to tell the story of how their neighborhoods will be improved as a result of the cleanup.
- Produce digital stories by community members.
- Work with schools on such activities like hosting a "Science Night."
- Get involved with the afterschool programs at Concord International School.
- Organize poetry readings related to the LDW/Duwamish River.
- Provide incentives for community members (i.e. local experts) to provide their feedback and input regarding the cleanup. Incentives would include food and childcare at meetings, monetary compensation for participation on input groups, etc.
- Organize small pizza parties for pocket neighborhoods most affected by the cleanup (as done by the Port of Seattle in its outreach with Terminal 117).
- Do small-scale neighborhood outreach around cleanups (as the City and Port did with the Terminal 117 cleanup).
- Hold Duwamish Stakeholders meetings in the evenings so that community members can more easily attend.
- Send out periodic emails about the cleanup.
- Simplify and streamline the EPA's website.
- Use social media, especially Facebook, to spread information about the cleanup.
- Appear on local TV stations to share information about the cleanup.
- Use a mapping website like HeyDuwamish.org to engage people in the cleanup.
- Provide information on traffic changes and monitoring information on such issues as air quality, water quality, noise and construction alerts, etc.
- Avoid community burnout by hosting too many meetings and forums around the cleanup.
- Flyers about events are good, especially if they are coupled with word-of-mouth reminders.

Appendix I: Glossary with Acronyms

Acronym	Definition
AOC	Administrative Order on Consent – Negotiated agreement between the EPA and Potentially Responsible Parties for work other than Remedial Action.
AR	Administrative Record – All documents that the EPA considered or relied on in selecting an action at a Superfund site. Actions include a Record of Decision for Remedial Action or an action memorandum for removal actions.
	Advisory – The Washington State Department of Health issues state-generated health advice to protect public health and provide information about risks from eating contaminated seafood (e.g., fish, shellfish). Fish advisories are based on the levels of contaminants in fish tissue and potential impacts on health. Advisories provide guidance on safe consumption rates for different fish species and locations to help people make informed decisions about consuming seafood from a specific waterbody. Advisories may provide recommendations to avoid or reduce consumption of seafood. They may also include suggestions like using fillet instead of whole fish, trimming fat tissue, or using cooking techniques to reduce exposure to contaminants in seafood.
ATSDR	Agency for Toxic Substances and Disease Registry, US Department of Health and Human Services.
	Capping – A technology to address contaminated sediment that places clean sand, gravel or other material (clay, carbon) over the contaminated sediment to isolate the contaminants from the surrounding environment.
	Carcinogen – A chemical or physical agent capable of causing cancer.
CAG	Community Advisory Group - A group that is made of representatives of diverse community interests. It provides a public forum for community members to present and discuss their concerns and needs related to the Superfund decision-making process.
CHSP	Community Health and Safety Plan – A plan that describes key health and safety personnel including detailed health and safety plans for protecting and informing the surrounding community when work is under way.
CIC	Community Involvement Coordinator (CIC) – CICs are EPA staff assigned to projects to assist communities in their interaction with the EPA and ensure that technical staff are aware of issues that concern the public in relation to the work the EPA is doing. As liaisons between technical project managers and the community, CICs provide opportunities for two-way communication throughout the life of a project.
CIP	Community Involvement Plan (CIP) – A CIP is a site-specific strategy to enable meaningful community involvement throughout the Superfund cleanup process. CIPs specify EPA-planned community involvement activities to address community needs, concerns, and expectations that are identified through community interviews and other means.
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended – This law, enacted by Congress on December 11, 1980, created the Superfund program. Specifically, CERCLA (1) established procedures and requirements for the cleanup of uncontrolled or abandoned hazardous waste sites; (2) provided for liability of persons responsible for releases of hazardous substances at these sites; and (3) established a trust fund to provide for cleanup when, for example, no viable responsible parties are available to pay for or perform the work.
	Contaminants – Any physical, chemical, biological, or radiological substance or matter that has an adverse effect on air, water, or soil.

Appendix I: Glossary with Acronyms *(continued)*

Acronym	Definition
	Contamination – Introduction into water, air, and soil of microorganisms, chemicals, toxic substances, wastes, or wastewater in a concentration that makes the medium unfit for its next intended use.
	Dredging – The removal of material from the bottom of lakes, rivers, harbors and other bodies of water. Most dredging is done to maintain or deepen navigation channels or porting areas for the safe passage of boats and ships. Dredging contaminated areas site may also be performed for the express purpose of reducing the exposure of marine biota (plants and animals) and humans to contaminated sediments and/or to prevent the spread of contaminated sediments to other areas. This type of dredging is termed environmental dredging.
DRCC/TAG	Duwamish River Cleanup Coalition/Technical Advisory Group - DRCC/TAG is a 501(c)3 non-profit organization involved in all aspects of the cleanup of the Duwamish River, working to ensure the cleanup meets community standards by restoring environmental health and protecting the fishers and families who use the river as well as reflecting the priorities, values and will of the people who live and work in the region. The organization serves as the EPA-recognized community advisory group for the Lower Duwamish Superfund Site.
EAA	Early Action Area – Areas in the LDW that were identified early in the process as the most contaminated areas in the waterway and targeted for preliminary cleanup
Ecology	Washington Department of Ecology - A state environmental agency.
ECOSS	ECOSS is a nonprofit organization that encourages urban redevelopment and a healthy environment by providing education, resources and technical assistance to diverse businesses and communities in the Puget Sound region.
EJ	Environmental Justice - The EPA defines Environmental Justice (EJ) as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental, and commercial operations or policies.
EPA	United States Environmental Protection Agency - A federal environmental agency.
ESD	Explanation of Significant Differences – The EPA publishes an explanation of the significant differences if the EPA determines that the remedial action at a site should differ significantly from the remedial action previously selected in the ROD. The EPA also publishes the reasons such changes are being made.
FS	Feasibility Study – Analysis of the practicability of a proposal; e.g., a description and analysis of potential cleanup alternatives for a site such as one on the National Priorities List. The feasibility study usually recommends selection of a cost-effective alternative. It usually starts as soon as the remedial investigation is under way; together, they are commonly referred to as the “RI/FS.”
	Habitat – A place where the physical and biological elements of ecosystems provide a suitable environment including the food, cover, and space resources needed for plant and animal livelihood.
	Information Repository – An Information Repository is a location in a public building convenient for local residents, such as a public school, city hall, or library, that contains information about a Superfund site, including technical reports and reference documents.

Appendix I: Glossary with Acronyms *(continued)*

Acronym	Definition
IC	Institutional Controls - Methods to reduce exposure to contamination instead of or in coordination with cleanup.
LDW	Lower Duwamish Waterway Superfund Site - The lower five miles of the Duwamish River, in Seattle, Washington. The site was added to EPA's National Priorities List (NPL) in 2001.
MTCA	Model Toxics Control Act - Washington State's cleanup law. It identifies, investigates, and cleans up facilities where hazardous substances have been released. It defines the role of Ecology and encourages public involvement in the decision-making process.
NCP	National Contingency Plan - The National Oil and Hazardous Substances Pollution Contingency Plan, more commonly called the National Contingency Plan or NCP, is the federal government's blueprint for responding to both oil spills and hazardous substance releases.
NPL	National Priorities List - The EPA's list of the most serious uncontrolled or abandoned hazardous waste sites identified for possible long-term remedial action under Superfund. The list is based primarily on the score a site receives from the Hazard Ranking System. The EPA is required to update the NPL at least once a year. A site must be on the NPL to receive money from the Trust Fund for remedial action.
	Pilot study - A small-scale experiment or set of observations undertaken to decide how and whether to launch a full-scale project or study.
PAHs	Polycyclic Aromatic Hydrocarbons - a group of toxic chemicals that are formed during the burning of substances such as coal, oil, gas, wood, garbage and tobacco and during the charbroiling of meat. Long periods of breathing, eating, or having skin contact with high levels of some PAHs may increase a person's risk of cancer.
PCBs	Polychlorinated Biphenyls (PCBs) - Human-made chemicals (for example, used in electrical equipment, transformers, caulk and paint) banned from use in most applications in 1979; PCBs stay in the environment for a long time and can build up in fish and shellfish.
PRP	Potentially Responsible Party - Any individual or company - including owners, operators, transporters or generators - potentially responsible for or contributing to a spill or other contamination at a Superfund site. Whenever possible, through administrative and legal actions, the EPA requires PRPs to clean up hazardous sites for which they are responsible.
PA/SI	Preliminary Assessment/Site Investigation - Once a contaminated site is identified, the EPA conducts a Preliminary Assessment/Site Inspection (PA/SI). For a PA/SI, the EPA generally reviews existing information, inspects the site, and may interview nearby residents to find out the history of the site and its effects on the population and the environment. The EPA also normally tests the soil, water, and air to determine what hazardous substances were left at the site and how serious the risks may be to human health and the environment.
	Proposed Plan - A plan for a site cleanup that available to the public for comment.
	Public comment period - The time allowed for the members of an affected community to express views and concerns regarding an action proposed to be taken by the EPA such as a rulemaking, permit, or Superfund remedy selection.
PHSKC	Public Health - Seattle and King County (local health department)

Appendix I: Glossary with Acronyms *(continued)*

Acronym	Definition
	Public information session – Informal public sessions that often use poster displays and fact sheets and that include EPA personnel and contractors who are available to discuss issues and answer questions. Public information sessions offer the public the opportunity to learn about project-related issues and to interact with the EPA on a one-to-one basis. Public information sessions do not require the use of court reporters and transcripts, although meeting summaries may be issued through community updates.
	Public meeting – Formal public sessions that are characterized by a presentation to the public followed by a question-and-answer session. Formal public meetings may involve the use of a court reporter and the issuance of transcripts. Formal public meetings are required only for the Proposed Plan and ROD amendments.
ROD	Record of Decision – A public document that explains which cleanup alternative(s) will be used at National Priorities List sites.
RA	Remedial Action – The actual construction or implementation phase of a Superfund site cleanup that follows remedial design.
RD	Remedial Design – A phase of remedial action that follows the Remedial Investigation/Feasibility Study and ROD and includes development of engineering drawings and specifications for a site cleanup. The details of the in-waterway work will be decided and contractors selected to perform the cleanup.
RI	Remedial Investigation – An in-depth study designed to gather data needed to determine the nature and extent of contamination at a Superfund site, establish site cleanup criteria, identify preliminary alternatives for remedial action, and support technical and cost analyses of alternatives. The remedial investigation is usually done with the feasibility study. Together they are usually referred to as the “RI/FS.”
RPM	Remedial Project Manager – The designated EPA or state official responsible for overseeing a Superfund cleanup project.
	Remedy – Long-term action that stops or substantially reduces a release or threat of a release of hazardous substances.
	Removal Action – Short-term immediate actions that address releases of hazardous substances that require expedited responses.
RCRA	Resource, Conservation and Recovery Act - This law, enacted by the US Congress, creates the framework for the proper management of hazardous and non-hazardous solid waste.
	Responsiveness Summary – A summary of oral and/or written public comments received by the EPA during a comment period on key EPA documents and the EPA’s response to those comments.
	Sediment – Topsoil, sand, and minerals washed from the land into water, usually after rain or snowmelt. Sediment lying at the bottom of a river, lake, or other waterbody provides habitat for worms, clams, and other benthic organisms, which are part of the aquatic food web.
SC	Source Control - The control of sources of pollution to prevent contamination of the environment.
	Stakeholder – Any organization, governmental entity, or individual that has a stake in or may be affected by the Superfund program.

Appendix I: Glossary with Acronyms *(continued)*

Acronym	Definition
	Superfund – The program operated under the legislative authority of CERCLA and Superfund Amendments and Reauthorization Act (SARA) that funds and carries out EPA solid waste emergency responses and removal and remedial activities. These activities include establishing the National Priorities List, investigating sites for inclusion on the list, determining their priority, and conducting and/or supervising cleanup and other remedial actions.
SuperJTI	Superfund Job Training Initiative - This national EPA contract provides job training to communities affected by hazardous waste sites regulated by the Superfund and Resource Conservation and Recovery Act (RCRA) programs, as well as federal facility and Tribal removal sites.
TAG	Technical Assistance Grant - A Technical Assistance Grant (TAG) helps communities participate in Superfund cleanup decision-making. It provides funding to community groups to contract their own technical advisor to interpret and explain technical reports, site conditions, and the EPA's proposed cleanup proposals and decisions. This federal grant is awarded to an incorporated nonprofit organization of community members affected by the site.
	Toxicity – The degree to which a substance or mixture of substances can harm humans or animals.
TASC	Technical Assistance Services for Communities - The program provides independent assistance through a national EPA contract to help communities better understand the science, regulations, and policies of environmental issues and the EPA actions.

Appendix J: Endnotes

1. Daniell W, Gould L, Cummings BJ, Childers J, Lenhart A. Health Impact Assessment: Proposed Cleanup Plan for the Lower Duwamish Waterway Superfund Site; Final Report. Seattle, WA: University of Washington, Just Health Action, and Duwamish River Cleanup Coalition/Technical Advisory Group. September 2013.
2. Gould, Linn, and Khanh Ho. "Addressing seafood contamination for subsistence fishers: Community participatory learning & action." <http://justhealthaction.org/wp-content/uploads/2016/02/JHA-subsistence-fisher-study-Jan-28-FINAL1.pdf>. 28 Jan. 2016.
3. King County, et al. "The Economics of Cleaning up the Lower Duwamish." http://www.kingcounty.gov/~media/environment/wastewater/DuwamishWaterway/docs/1101_DuwCleanupEcon.ashx?la=en. n.d. Web.
4. Gould, Linn.
5. Human health risks are greater with fish and shellfish that live in the LDW year-round, called resident fish or shellfish.
6. National Environmental Justice Advisory Council (NEJAC), Seattle WA. "Fish Consumption and Environmental Justice (revised)." https://www.epa.gov/sites/production/files/2015-02/documents/fish-consump-report_1102.pdf. Nov. 2002.
7. Daniell W.
8. EPA. Record of Decision, Lower Duwamish Waterway Superfund Site. https://www3.epa.gov/region10/pdf/sites/ldw/ROD_final_11-21-2014.pdf. Environmental Protection Agency, Nov. 2014.
9. U.S. Census Bureau; American Community Survey, 2014 American Community Survey; using American FactFinder; <http://factfinder2.census.gov>. June 2016.
10. Cummings BJ, Childers J, Daniell W, Gould L, Lenhart A. Health Impact Assessment: Proposed Cleanup Plan for the Lower Duwamish Waterway Superfund Site; Technical Report: Effects of the proposed cleanup plan on local residents. Seattle, WA: University of Washington, Just Health Action, and Duwamish River Cleanup Coalition/Technical Advisory Group. September 2013.
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12. U.S. Census Bureau
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15. Department of Ecology. "Public Participation Plan : Boeing Field Chevron Site Seattle, WA." <https://fortress.wa.gov/ecy/gsp/DocViewer.ashx?did=45407>. April 2015.
16. U.S. Census Bureau
17. EPA. Record of Decision, Lower Duwamish Waterway Superfund Site. https://www3.epa.gov/region10/pdf/sites/ldw/ROD_final_11-21-2014.pdf. Environmental Protection Agency, Nov. 2014. Print.

Appendix J: Endnotes *(continued)*

18. "This MOA is consistent with ... the 2004 MOU. The LDW Site is an enhanced involvement site, and this MOA, in combination with the 2004 MOU, serves the purpose of a site-specific scope of work for an enhanced involvement site for the CERCLA cleanup, as defined by the Ecology/EPA agreement." Washington State Department of Ecology, and Environmental Protection Agency. "Lower Duwamish Waterway Site Memorandum of Agreement Between The United States Environmental Protection Agency and The Washington State Department of Ecology." https://www3.epa.gov/region10/pdf/sites/ldw/ROD_MOA-Ecology_11-20-2014.pdf. Nov. 2014. Print.

19. 40 CFR §35.4070: "This technical assistance should contribute to the public's ability to participate in the decision making process by improving the public's understanding overall conditions and activities at the site. (b) Your group may use a portion of your funds to (1) undertake activities that communicate site information to the public through newsletters, public meetings or similar activities".)

20. For example, the loss of Department of Ecology's Public Participation Grant (PPG) funds for the 15-17 biennium budget affected the group's ability to fully engage in the public process.

21. Gould, Linn.

22. National Environmental Justice Advisory Council (NEJAC).

23. EPA. "Appendix B: Environmental Justice Analysis for the Lower Duwamish Waterway Superfund Cleanup." https://www3.epa.gov/region10/pdf/sites/ldw/pp/ej_analysis_ldw_feb_2013.pdf. Feb. 2013. Print.

24. NCP 40 CFR §300.435(c)(3) notes this requirement. A public briefing can also be termed as a public meeting, which is detailed at <https://sempub.epa.gov/work/HQ/174715.pdf>.

25. Including potentially responsible parties and non-potentially responsible parties.

26. Including King County and the Seattle of Seattle, which are potentially responsible parties.

27. Daniell W.

28. "Voices of the Mien Community." Cross Cultural Health Care Program, 1996. Web. http://www.migrationpolicy.org/sites/default/files/language_portal/Voices%20of%20the%20Mien%20Community_0.pdf.

29. "South Park Greenspace Vision Plan." Seattle Parks Foundation, South Park Neighborhood Association, June 2014. Web. https://issuu.com/yu-chikellyhuang/docs/south_park_green_space_vision_plan_591daa2bdbc9cf.

